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COLLECTING NOTES AND NEW DATA
ON THE TIGER BEETLE FAUNA OF SULAWESI,
INDONESIA, WITH DESCRIPTIONS
OF FOURTEEN NEW TAXA

(COLEOPTERA, CICINDELIDAE)

INTRODUCTION

Exceptionally rich and diverse, the tiger beetle fauna of the Indonesian island of Sulawesi (formerly: Celebes), was revised by the first author seventeen years ago (CASSOLA 1991). Several additional new species were subsequently discovered and described (SAWADA & WIESNER 1994, 2000; CASSOLA 1996, 1997; MATALIN 1998; WERNER & WIESNER 1997, 1999; CASSOLA & WIESNER 2001; NAVIAUX 2002), and more data were provided by CASSOLA & SAWADA (1994), NAVIAUX (1995) and SAWADA & WIESNER (2000). The entire fauna was first summarized by CASSOLA & PEARSON (2000), who at the time recorded a total of 92 species. However, our present reckoning of the Sulawesi tiger beetle fauna, including the thirteen new species described below as well as unpublished information, puts the number of species at 116 species, 93 (80.1%) of which are apparently endemic to Sulawesi. Considering that the total land area of Sulawesi and its offshore islands is said to be only 186,145 square kilometres (WHITTEN & WHITTEN 1992), this Indonesian island is perhaps the richest area of the world as far as the ratio surface area/tiger beetle species number is concerned (only 1,604 km² per species). Moreover, considering that some areas are still not adequately sampled, the full number of species is probably even higher and this

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ratio probably lower. Sulawesi is definitely one of the great biodiversity hotspots of the world (WHITTEN *et al.* 2004).

The great Victorian naturalist, Alfred Russel Wallace, visited South Sulawesi (Makassar) in 1856 and 1857, and North Sulawesi (Manado) in 1859. He paid special attention to the tiger beetles, which was one of his favourite groups. He wrote: "I was myself very successful in one beautiful group of insects, the tiger-beetles, which seem more abundant and varied here than anywhere else in the Archipelago ... About the roads in the forest, I found the large and handsome *Cicindela heros* [in present-day taxonomy: *Hipparidium heros*] ... But my finest discovery was the *Cicindela gloriosa* [in present-day taxonomy: *Wallacedela gloriosa*], which I found on mossy stones just rising above the water" (WALLACE 1869). Unfortunately, despite the efforts we spent in the same area probably visited by Wallace, we were unable to rediscover this latter species. The natural environment throughout much of Sulawesi, however, has changed very much and many forest areas have unfortunately been fully cut over.

Over half the Sulawesi fauna is represented by just two genera of Cicindelina, *Thopeutica* Chaudoir in Schaum, 1861 (SCHAUM 1861), and *Wallacedela* Cassola, 1991 (CASSOLA 1991), which share the same general facies but are probably not closely related. *Thopeutica* is a Wallacean endemic genus which includes elements from both Sulawesi (subgenus *Thopeutica* s. str., with 20 species; subgenus *Pseudotherates* Cassola, 1991, with 19 species) and the Philippines (subgenus *Thopeutica* s. str., with 23 species: CASSOLA & WARD 2004 and CASSOLA & ZETTEL 2006; subgenus *Philippiniella* Cassola & Ward, 2004, with 4 species: CASSOLA & WARD 2004). *Wallacedela* is a similarly-looking but probably not closely related genus and it too, apart from a few puzzling records from Ambon, Moluccas (CASSOLA 1996, MATALIN 1998), is apparently a Sulawesi endemic genus which includes 34 described species.

The 69 taxa collected include thirteen new species, one new subspecies and twenty-one species which had been described previously by the first author (CASSOLA 1991; CASSOLA & WIESNER 2001). The holotype specimens of most new taxa described below were deposited in the Museo Civico di Storia Naturale "G. Doria", Genoa, Italy (MSNG); all the other collected specimens, unless otherwise indicated, are presently either in first author's (FCC) or in second author's (DBC) collections.

New province records are given for many species. In the following list, as far as possible, the localities are arranged in N to S and W to E order. Location of localities was made possible also by consulting the Nelles map "Indonesia 6: Sulawesi" (München, Germany, scale 1:1,500,000) and the Pt. Karya Pembina Swajaya map (scale 1:1,000,000), Surabaya, Indonesia. Moreover, as to the northern province, we consulted also the IndoPrima Sarana map "Sulawesi Utara" (scale 1:500.000), Surabaya, Indonesia, while for the Gorontalo province we used the Pt Karya Pembina Swajaya map "Sulawesi Gorontalo" (scale 1: 300,000) .

METHODS

This paper is based entirely on specimens collected by both authors during three field trips to Sulawesi. In the course of this

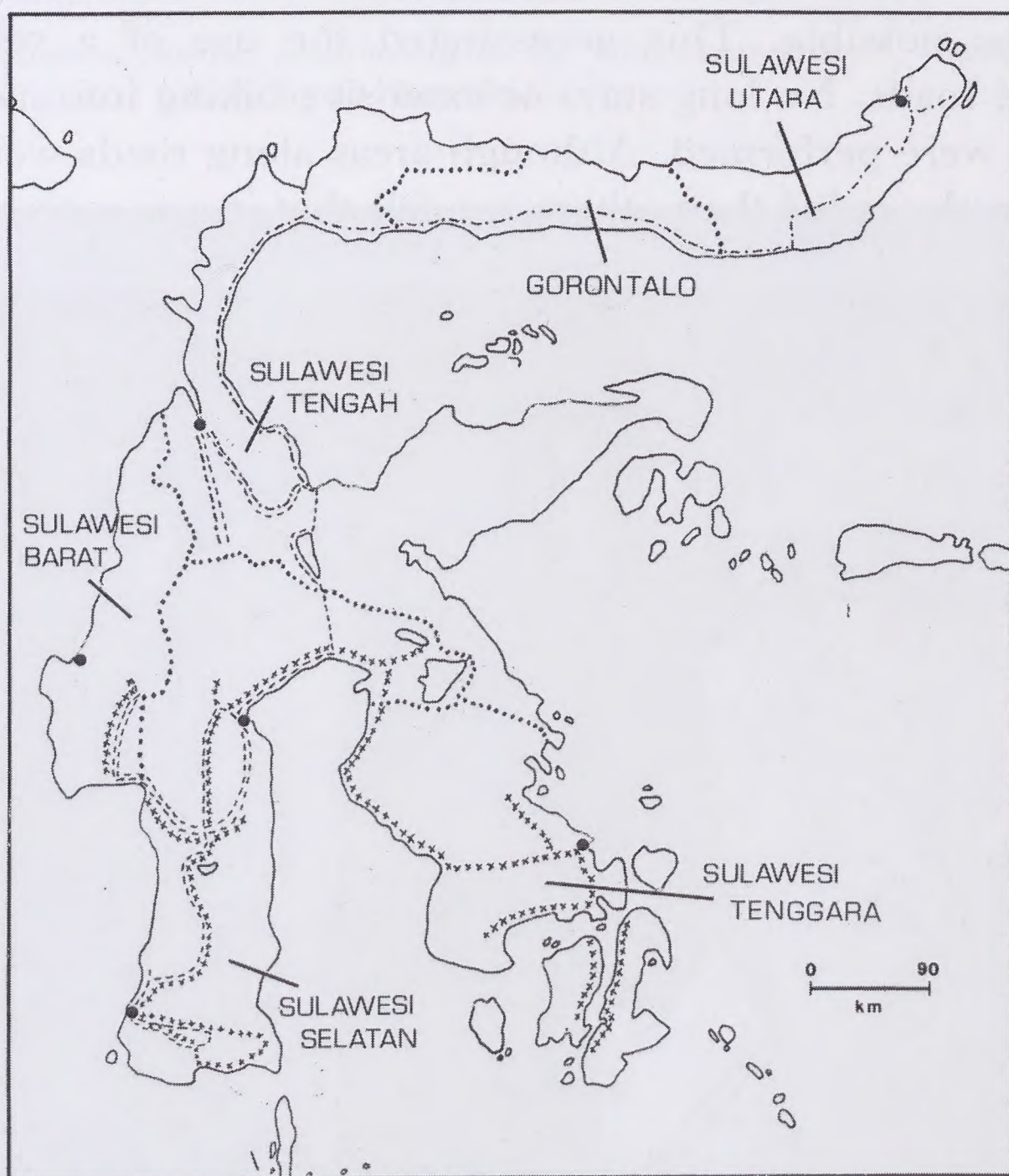


Fig. 1 - Map of itineraries. Dotted lines: province boundaries; dashes: 2005; dashes and dots: 2006; small crosses: 2007.

survey over 5,000 specimens were collected and all six the Sulawesi provinces were visited. The first trip (April 18-May 6, 2005) started in Makassar and ended in Palu, and included Sulawesi Selatan (South), Sulawesi Barat (West) and Sulawesi Tengah (Central); 42 species and 1544 specimens were collected. The second trip (March 28-April 16, 2006) started in Manado and ended in Palu and included Sulawesi Utara (North), Gorontalo (North-West) and Sulawesi Tengah; 39 species and 1681 specimens were collected. The third trip (March 11-April 9, 2007) started in Makassar and ended in Kendari and included Sulawesi Selatan, Sulawesi Barat and Sulawesi Tenggara (South-East); 44 species and 1801 specimens were collected. Sixty-eight tiger beetle species (thirteen of which new to science) and one new subspecies were collected during our survey. A total of sixty-eight days were spent in the field (see itinerary map, fig. 1). Observations were also made of the habitats and behaviour of several species.

This was a survey and it was our intention to visit as many localities as possible. This necessitated the use of a vehicle and established roads. No long stays or extensive hiking into more primitive areas were performed. Although areas along roads were usually much more degraded than others, we felt that it was a necessary evil



Fig. 2 - *Hipparidium heros* in the wild (Moramo Waterfalls, Sulawesi Tenggara) (photo by D. Brzoska).



Fig. 3 - *Calomera funerea multinotata* in the wild (Langkowala, southern Sulawesi Tenggara) (photo by D. Brzoska).



Fig. 4 - Roadcut between Rantepao and Palopo. *Dilatotarsa patricia* and *Cylindera (Ifasina) craspedota* were found here (photo by D. Brzoska).

of this type of survey. Also, because we travelled with a driver and a guide, we decided to forego collecting at night with lights, so as to have a well rested driver during the day. It is quite possible that some of the tiger beetle species are nocturnal and these were probably uncollected for this reason (see discussion under *Wallacedela glorioparadoxa*).

As many different “typical” habitats of tiger beetles as possible were visited, including sea beaches, mangrove mudflats, forest paths and vegetation (figs 2), sand/gravel bars of rivers (fig. 3), clay road cuts and landslides (fig. 4), open paths and tracks, forest streams and streamlets. But, by far, the most important habitats, where more than 70% of the species was found, were semi-open forest streams and rivers (figs 5-9). Almost all of the species of the genera *Oxygoniola*, *Therates*, *Thopectica* and *Wallacedela* were collected (often syntopically and in good numbers) on rocks and logs in the water and overhanging adjacent vegetation along heavily vegetated flowing forest streams and streamlets (figs. 10-18). This necessitated entering the water and hiking along the river beds (fig. 19). Deep water, slippery rock, low light, unsure footing and very wary tiger beetles made collecting quite a challenge. Some of the larger species were found on larger, more open streams and rivers, where the swift current, deep water and unsure footing made collecting very problematic and an adventure in itself (fig. 20). Footwear with felt or good anti-slip soles helped greatly, while insect nets with a diameter of 18 inches made sweeping beetles off rocks and vegetation easier. Also the net handles four to five feet long served as a wading staff and extended our reach in collecting these wary insects.

The descriptive locality info was based largely on information that our guide was able to obtain from the local people. The use of kilometers was obtained either by use of stone markers along the roads or directly from the vehicle’s odometer. This info should locate the collecting locality in general, but more specifically each locality is recorded with latitude and longitude coordinates using a Garmin GPS V System.

Photographs were taken by both authors using Nikon digital cameras Coolpix 8800 (FC) or Coolpix 8700 (DWB). Communication in the field was maintained by use of Motorola “Talk About” two-way radios.



Fig. 5 - Half-dry gully near Pandiri on the road to Poso, type locality of *Wallacelada posoana* (photo by F. Cassola).



Fig. 6 - Streamlet on Bada rd, W of Tonusu, Sulawesi Tengah: habitat of several tiger beetle species (photo by F. Cassola).



Fig. 7 - Streamlet at Balang Kaliki, Kappo Lembang, Sulawesi Tenggara (photo by D. Brzoska).



Fig. 8 - Stream 9.5 km N Rantepao, Torajaland, Sulawesi Selatan. Several tiger beetle species [*Thopeutica (Thopeutica) toraja*, *Thopeutica (Thopeutica) stenodera*, *Thopeutica (Thopeutica) waltheri*, *Wallacedela horii*, *Wallacedela kobayashii* and *Wallacedela hirofumii*] were found here (photo by F. Cas-sola).

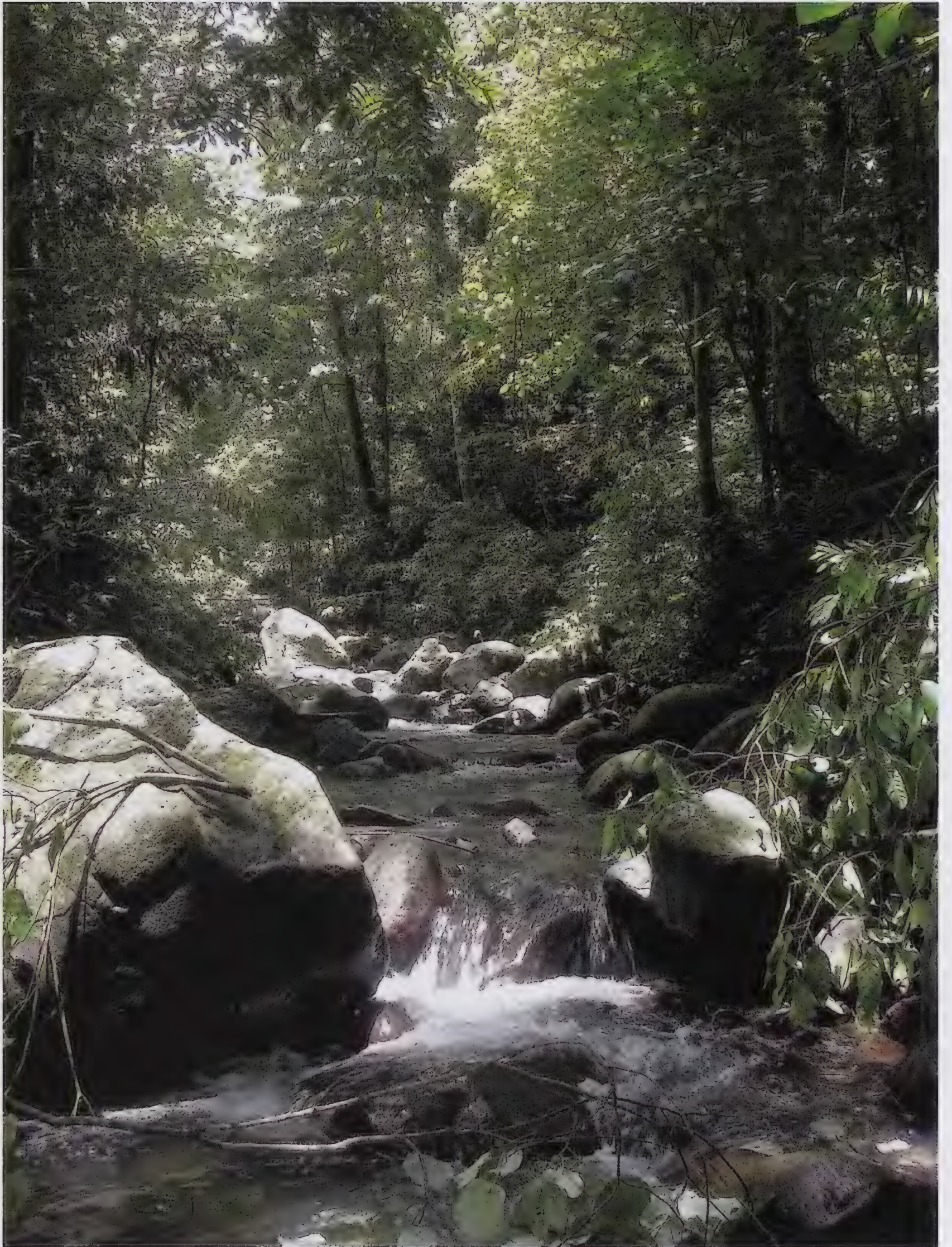


Fig. 9 - London Creek, tributary of River Tumpah, Dumoga Bone National Park: habitat of several tiger beetle species (photo by F. Cassola).



Fig. 10 - *Therates labiatus* in the wild (photo by F. Cassola).



Fig. 11 - *Therates labiatus* in the wild (Bada rd, W Tonusu, Sulawesi Tengah) (photo by F. Cassola).



Fig. 12 - *Therates labiatus* in the wild, facing the observer (S Kendari, Sulawesi Tenggara) (photo by D. Brzoska).



Fig. 13 - *Thopeutica (Thopeutica) diana* in the wild (9.5 km N Rantepao, Torajaland, Sulawesi Selatan) (photo by D. Brzoska).



Fig. 14 - *Thopeutica (Thopeutica) diana* in the wild (9.5 km N Rantepao, Torajaland, Sulawesi Selatan) (photo by D. Brzoska).



Fig. 15 - *Thopeutica (Thopeutica) bugis* in the wild (stream at Huduriah nr Kendari Airport) (photo by D. Brzoska).



Fig. 16 - *Thopeutica* (*Pseudootherates*) *beccarii* in the wild (Moramo Waterfalls, Sumber Sari, Sulawesi Tenggara) (photo by D. Brzoska).



Fig. 17 - *Wallacedela butonensis* in the wild (Wakarumba, Buton I., Sulawesi Tenggara) (photo by D. Brzoska).



Fig. 18 - *Wallacedela horii horii* at 9.5 km N Rantepao, Torajaland, Sulawesi Selatan (photo by D. Brzoska).



Fig. 19 - The authors (F. Cassola, left; D. Brzoska, right) looking for tiger beetles along a river 14 km N of Mamasa (Sulawesi Barat) (photo by N. Rusdi).



Fig. 20 - Dave Brzoska in the River Tumpah, Dumoga Bone National Park (Sulawesi 2006, 040) (photo by F. Cassola).

LIST OF SPECIES

1. *Neocollyris (Neocollyris) celebensis* (Chaudoir, 1860)

SULAWESI TENGAH: Ongka (W Moutong), 00°29.2N-120°48.8E, 70 m, 8.IV.06, F. Cassola, 2 ♂♂ 1 ♀ (FCC); D. Brzoska, 7 ♂♂ 3 ♀♀ (DBC).

SULAWESI SELATAN: 21 km E Maros, 05°03.4S-119°43.9E, 170 m, 21.IV.05, D. Brzoska, 2 ♂♂ (DBC). 40.5 km W Soroako, 02°39.3S-121°11.3E, 170 m, 23.III.07, D. Brzoska, 1 ♀ (DBC).

SULAWESI TENGGARA: 27.2 km W Kendari, 03°58.9S-122°22.4E, 28 m, 28.III.07, D. Brzoska, 1 ♂ (DBC)

Specimens collected: 17.

Apparently a Sulawesi endemic, this slender elongate species was recorded from all over the island (NAVIAUX 1995). The two specimens from near Maros were collected perched on large sub-horizontal leaves near a paved road, while the ones from Ongka were collected along a small steep trail following a small stream. We were somewhat puzzled by our apparent inability to collect more *Neocollyris* specimens as many potentially favourable habitats along

the forest trails were duly examined. Moreover, much to our disappointment, we were not able to find specimens of another Collyrine genus, *Tricondyla* Latreille, 1822, which includes conspicuous, flightless, tree-dwelling species (that are sometimes found also while rapidly running on the ground when passing from one tree to the other). This genus is known to inhabit Sulawesi with at least five species, three of which are apparently endemic (NAVIAUX 2002).

2. *Dilatotarsa patricia* (Schaum, 1861)

SULAWESI UTARA: 1 km N Ratahan (S Tomohon), 01°04.1N-124°48.5E, 490 m, 31.III.06, F. Cassola, 1 ♀ (FCC), 1 ♂ 1 ♀ (DBC). 2 km E Kawangkoan, 01°12.2N-124°47.0E, 715 m, 1.IV.06, D. Brzoska, 1 ♂ (DBC).

SULAWESI TENGAH: S Pendolo, 02°14.5S-120°47.5E, 30.IV.05, F. Cassola, 1 ♀ (FCC).

SULAWESI BARAT: 31.4 km N Polewali on Mamasa rd, nr Masawa, 03°17.2S-119°22.0E, 995 m, 26.IV.05, F. Cassola, 1 ♂ (FCC); D. Brzoska, 2 ♂♂ (DBC). *Ibid.*, 16.III.07, D. Brzoska, 1 ♂ 1 ♀ (DBC). 37 km N Polewali on Mamasa rd, 03°15.4S-119°20.4E, 870m, 16.III.07, D. Brzoska, 1 ♂ (DBC).

SULAWESI SELATAN: Torajaland, 5.5 km N Rantepao, 02°56.6S-119°52.1E, 925m, 21.III.07, D. Brzoska, 4 ♂♂ 1 ♀ (DBC). Torajaland, 10.7 km N Rantepao, 02°55.4S-109°50.8E, 1270 m, 22.III.07, F. Cassola, 1 ♂ 4 ♀♀. Torajaland, 28 km E Rantepao on Palopo rd, 02°57.3S-120°04.2E, 1120 m, 24.IV.05, F. Cassola, 5 ♂♂ (FCC); D. Brzoska, 7 ♂♂ 4 ♀♀ (DBC).

Specimens collected: 37.

The small genus *Dilatotarsa* Dokhtourow, 1882, was reviewed by CASSOLA & MURRAY in 1979. Species of this genus are only known from Sumatra, Borneo, Sulawesi and the Philippines (Palawan, Mindoro, Luzon). *D. patricia*, a normally winged but flightless species, was found resting or walking on vertical or subvertical embankments and roadcuts, especially on moist, mossy and partially vegetated surfaces, and is apparently new to Sulawesi Tengah. However, a supposed junior synonym, *D. bigranifera* Doktouroff, 1882 (which in fact happened to be the type-species of this genus), was described from Mindoro in the Philippines (CASSOLA 1991); if this synonymy, proposed by HORN (1897), proves to be correct, *patricia* would occur in the Philippines as well, thus proving itself not to be a Sulawesi endemic. Anyway, another *Dilatotarsa* endemic species, *D. cassolai*, is also known from the Palopo area, Sulawesi Selatan (WERNER & SAWADA 1990), but we failed to col-

lect it. Larval holes with a distinctive ring around the hole were thought to be *D. patricia* because of the size of the burrows and their proximity to adults on the same vertical cliffs and roadcuts (fig. 21).



Fig. 21 - Larval hole thought to be that of *Dilatotarsa* (photo by F. Cassola).

3. *Oxygoniola chamaeleon* W. Horn, 1892

SULAWESI UTARA: Dumoga Bone NP, London R. (trib. of Tumpah R.), 00°34.6N-123°54.0E, 230 m, 3.IV.06, F. Cassola, 1 ♀ (FCC); D. Brzoska, 1 ♂ (DBC).

SULAWESI TENGAH: 5.8 km S “km 4-Basidondo” (SW Tolitoli), 00°42.4N-120°37.5E, 135 m, 9.IV.06, F. Cassola, 2 ♂♂ 1 ♀ (FCC). 5.8 km S “km 4-Basidondo”, 00°42.5N-120°37.5E, 136 m, 9.IV.06, D. Brzoska, 4 ♂♂ 4 ♀♀ (DBC). NW side of Lake Poso, 6.9 km W Tonusu on Bada rd, 01°47.3S-120°30.2E, 1200 m, 1.V.05, D. Brzoska, 1 ♀ (DBC). NW side of Lake Poso, 10.4 km W Tonusu on Bada rd, 01°47.9S-120°29.5E, 1125 m, 12.IV.06, F. Cassola, 1 ♂ (FCC).

SULAWESI BARAT: 23.9 km N Polewali on Mamasa rd, 03°18.9S-119°22.3E, 875 m, 16.III.07, F. Cassola, 1 ♀; D. Brzoska, 1 ♀ (DBC). *Ibid.*, 20.III.07, F. Cassola, 1 ♂ (FCC); D. Brzoska, 1 ♂ (DBC).

SULAWESI SELATAN: Torajaland, 10.7 km N Rantepao, 02°55.4S-119°50.8E, 1270 m, 22.III.07, D. Brzoska, 2 ♂♂ (DBC). Torajaland, 21 km W Palopo, Paredean R., 02°57.0S-120°05.6E, 575 m, 22.III.07, D. Brzoska, 3 ♂♂ 1 ♀ (DBC). Bunginer, Gowa, Bontotene (nr Molino), Manappa R., 05°16.5S-119°51.8E, 850 m, 11.III.07, D. Brzoska, 2 ♂♂ (DBC). 28 km N Bantaeng, 05°23.7S-120°08.7E, 820m, 12.III.07, D. Brzoska, 1 ♀ (DBC). Bantaeng-Mt. Lompobattang, Sinoa R., 05°29.8S-115°55.4E, 500 m, 13.III.07, F. Cassola, 1 ♂ (FCC). 20 km W Soroako, 02°35.2S-121°18.6E, 500 m, 23.III.07, F. Cassola, 2 ♂♂ (FCC); D. Brzoska, 7 ♂♂ 3 ♀♀ (DBC).

SULAWESI TENGGARA: Sila (NW Kolaka), Sila R., 03°42.7S-121°05.0E, 28 m, 25.III.07, F. Cassola, 1 ♂ (FCC); D. Brzoska, 5 ♂♂ 3 ♀♀ (DBC).

Specimens collected: 49.

A very distinct species and a Sulawesi endemic, easily recognizable by the testaceous legs and the mostly olive-green elytral and upperside colour. Some specimens, however, are darker, bronze to almost blackish in colour. The elytral maculation is represented by just a yellow apical lunule from the subapical angle to the suture. Size is variable from 8.1 to 10.5 mm (without the labrum). A colour drawing of the insect was given by HORN (1910). Our specimens were collected while flying or perched on vegetation above fast flowing, heavily vegetated streams. Their colour, posture and sluggish flight pattern were at first more reminiscent of a chrysomelid than a cicindelid. This species is new to both Sulawesi Barat and Sulawesi Tenggara.

4. *Therates fasciatus fasciatus* (Fabricius, 1801)

SULAWESI UTARA: N Wujur (N Lake Mooat), Mahatus, 00°49.4N-124°26.4E, 1015 m, 2.IV.06, D. Brzoska, 1 ♀ (DBC). Dumoga-Bone NP, London R. (trib. of Tumpah R.), 00°34.6N-123°54.0E, 230 m, 3.IV.06, D. Brzoska, 1 ♀ (DBC). 1.5 km N Matayangan on Molibagu rd, 00°28.5N-123°58.3E, 225 m, 4.IV.06, D. Brzoska, 2 ♂♂ 2 ♀♀ (DBC). 8.9 km N Molibagu, 00°26.6N-123°58.2E, 210 m, 5.IV.06, D. Brzoska, 2 ♂♂ 2 ♀♀ (DBC). 2 km E Tolutu (W Molibagu), 00°19.3N-123°45.1E, 10 m, 5.IV.06, D. Brzoska, 1 ♀ (DBC).

GORONTALO: Dutabo (E Gorontalo), 00°33.1N-123°09.7E, 102 m, 6.IV.06, D. Brzoska, 1 ♂ (DBC). Lampotoo (E Gorontalo), 00°31.1S-123°12.2E, 20 m, 6.IV.06, D. Brzoska, 2 ♂♂ (DBC). Tutulo (E Gorontalo), 00°30.9N-123°14.4E, 75 m, 6.IV.06, D. Brzoska, 1 ♂ (DBC). Tulabolo (E Gorontalo), 00°30.5N-123°15.4E, 68 m, 6.IV.06, D. Brzoska, 2 ♂♂ 1 ♀ (DBC).

SULAWESI TENGAH: 2.5 km S "km 4-Basidondo" (SW Tolitoli), 00°43.3N-120°37.0E, 100 m, 9.IV.06, D. Brzoska, 2 ♂♂ 1 ♀ (DBC). Ongka (W Moutong), 00°29.2N-120°48.8E, 70 m, 8.IV.06, F. Cassola, 2 ♂♂ 1 ♀ (FCC); D. Brzoska, 9 ♂♂ 10 ♀♀ (DBC). 35 km NW Mapane, Tambarana on Tinombo-Poso rd,

01°13.7S-120°33.5E, 28 m, 13.IV.06, F. Cassola, 4 ♂♂ 5 ♀♀ (FCC); D. Brzoska, 18 ♂♂ 14 ♀♀ (DBC). 12 km N Kulawi on Gimpu rd (S Palu), 01°21.4S-119°58.4E, 400 m, 6.V.05, D. Brzoska, 2 ♂♂ (DBC). *Ibid.*, 15.IV.06, F. Cassola, 1 ♀ (FCC). 5.2 km W Pandiri on Poso rd, 20 m, 01°28.2S-120°46.0E, 2.V.05, D. Brzoska, 1 ♂ (DBC). *Ibid.*, 11.IV.06, F. Cassola, 2 ♂♂ 1 ♀ (FCC); D. Brzoska, 3 ♂♂ (DBC). 12.9 km SW Mapane on Watutau rd, 01°31.1S-120°37.8E, 295 m, 3.V.05, D. Brzoska, 8 ♂♂ (DBC). *Ibid.*, 13.IV.06, F. Cassola, 4 ♂♂ 5 ♀♀ (FCC); D. Brzoska, 19 ♂♂ 11 ♀♀ (DBC). 17.4 km SW Mapane on Watutau rd, 01°31.9S-120°37.5E, 326 m, 13.IV.06, D. Brzoska, 1 ♂ 7 ♀♀ (DBC). 5 km N Gimpu (S Palu), 01°34.0S-120°01.4E, 520 m, 5.V.05, D. Brzoska, 1 ♀ (DBC). 6 km S Gimpu (S Palu), 01°39.9S-120°02.7E, 400 m, 5.V.05, D. Brzoska, 1 ♀ (DBC). 7.8 km N Tentena, 01°40.4S-120°39.2E, 540 m, 2.V.05, D. Brzoska, 1 ♂ 2 ♀♀ (DBC). NW side of Lake Poso, Tonusu, Saluopa Waterfall, 01°45.1S-120°32.4E, 555 m, 2.V.05, F. Cassola, 2 ♂♂ 2 ♀♀ (FCC); D. Brzoska, 3 ♂♂ 3 ♀♀ (DBC). 6.9 km W Tonusu on Bada rd, 01°47.3S-120°30.1E, 1200 m, 1.V.05, D. Brzoska, 1 ♂ (DBC). *Ibid.*, 12.IV.06, F. Cassola, 1 ♂ 1 ♀ (FCC). 5.2 km W Tonusu on Bada rd, 01°47.3S-120°30.7E, 1200 m, 1.V.05, D. Brzoska, 3 ♂♂ 1 ♀ (DBC). 7.2 km W Tonusu on Bada rd, 01°47.5S-120°30.2E, 955 m, 12.IV.06, D. Brzoska, 2 ♂♂ (DBC). W side of Lake Poso, Tonusu rd, 6 km S of Bada rd jct, 01°47.9S-120°31.8E, 525 m, 11.IV.06, F. Cassola, 7 ♂♂ 2 ♀♀ (FCC); D. Brzoska, 6 ♂♂ 6 ♀♀ (DBC).

SULAWESI BARAT: 23.9 km N Polewali on Mamasa rd, 03°18.9S-119°22.3E, 875 m, 16.III.07, D. Brzoska, 1 ♂ (DBC). *Ibid.*, 20.III.07, F. Cassola, 1 ♂ (FCC); D. Brzoska, 2 ♂♂ 1 ♀♀ (DBC).

SULAWESI SELATAN: Bulu Dua (E Tanete), Siri R., 04°30.3S-119°47.2E, 700 m, 22.IV.05, D. Brzoska, 3 ♂♂ 1 ♀ (DBC).

Specimens collected: 203.

This species - together with *Th. labiatus* the very first species of the genus *Therates* Latreille, 1817, to be described (FABRICIUS 1801) - is easily recognized by the testaceous metasternum and abdominal sternites, as well as for the wide rufescent front part of elytra (often extended down to the middle), associated with a rufescent elytral apex. Moreover, the apical spines are usually blunt or effaced and are placed almost on the same transversal line. Recorded from the Philippines and the Moluccas (as well), this species needs to be reviewed, as some so-called “subspecies” could well be separate species (CASSOLA 1985). New to Sulawesi Barat.

5. *Therates wiesneri* Cassola, 1991

SULAWESI TENGAH: 12 km N Kulawi on Gimpu rd (S Palu), 01°21.4S-119°58.4E, 400 m, 6.VI.05, F. Cassola, 1 ♀ (FCC). *Ibid.*, 15.IV.06, F. Cassola, 1 ♂ 1 ♀ (FCC). 11 km N Gimpu (S Palu), 01°31.8S-120°00.7E, 620 m, 5.V.05, D. Brzoska, 2 ♀♀ (DBC). 6 km N Gimpu (S Palu), 01°33.8S-120°01.4E, 530 m,

5.V.05, D. Brzoska, 1 ♀ (DBC). 5 km N Gimpu (S Palu), 01°34.0S-120°01.4E, 520 m, 5.V.05, D. Brzoska, 1 ♂ 1 ♀ (DBC).

SULAWESI BARAT: 23.9 km N Polewali on Mamasa rd, 03°18.9S-119°22.3E, 877 m, 28.IV.05, F. Cassola, 1 ♂ (FCC).

Specimens collected: 9.

A close relative of *fasciatus*, with testaceous sternum and metepisterna, described from the Palu area (Lore Lindu National Park) (CASSOLA 1991). The humeral testaceous area does not cover the whole of the basal callus, which is partly shining black as are the elytra (except the elytral apex). New to Sulawesi Barat.

6. *Therates bipunctatus* Wiesner, 1988

SULAWESI TENGAH: 5.2 km N Pandiri on Poso rd, 01°28.2S-120°46.0E, 20 m, 11.IV.06, D. Brzoska, 1 ♂ (DBC). NW of Lake Poso, 6.9 km W Tonusu on Bada rd, 01°47.3S-120°30.2E, 1200 m, 1.V.05, D. Brzoska, 1 ♂ (DBC). W side of Lake Poso, Tonusu rd, 6 km S of Bada rd jct, 01°47.9S-120°31.8E, 525 m, 11.IV.06, F. Cassola, 2 ♀♀ (FCC); D. Brzoska, 6 ♂♂ 7 ♀♀ (DBC). 5.6 km N Panjo on Tonusu rd, 01°58.4S-120°34.4E, 530 m, 1.V.05, D. Brzoska, 1 ♂ 2 ♀♀ (DBC). 8 km S Panjo on Tonusu rd, 02°03.5S-120°37.7E, 530 m, 1.V.05, D. Brzoska, 1 ♂ (DBC). 41.5 km N Wotu, 02°20.3S-120°47.5E, 550 m, 30.IV.05, F. Cassola, 5 ♂♂ 1 ♀ (FCC); D. Brzoska, 7 ♂♂ 4 ♀♀ (DBC).

SULAWESI SELATAN: Torajaland, 33 km E Rantepao on Palopo rd, 02°57.5S-120°05.0E, 845 m, 24.IV.05, D. Brzoska, 1 ♀ (DBC). 29.4 km N Wotu, 02°22.5S-120°47.4E, 500 m, 30.IV.05, D. Brzoska, 3 ♂♂ (DBC). 20 km W Soroako, 02°35.2S-121°18.6E, 500 m, 23.III.07, F. Cassola, 1 ♂ (FCC). 40.5 km W Soroako, 02°39.3S-120°01.3E, 170 m, 23.III.07, F. Cassola, 1 ♂ 1 ♀ (FCC).

SULAWESI TENGGARA: 11 km SE Asera (N Kendari), 03°34.7S-122°09.2E, 210 m, 29.III.07, F. Cassola, 2 ♂♂ (FCC). *Ibid.*, 30.III.07, F. Cassola, 1 ♂ (FCC). 3.9 km SE Asera (N Kendari), 03°34.4S-122°08.4E, 70 m, 29.III.07, F. Cassola, 1 ♀ (FCC). 27.2 km W Kendari, 03°48.9S-122°22.4E, 28 m, 28.III.07, F. Cassola, 1 ♂ (FCC).

Specimens collected: 50.

Because of their small size, testaceous sternum and metepisterna, and short blunt elytral spines, these specimens are obviously close relatives of *fasciatus*. However, they clearly differ by the fully rufescent elytra with a small shining black area in the middle (not reaching the lateral border in most specimens), thus being quite consistent with the *bipunctatus* figures and description given by WIESNER (1988). However, examination of a paratype specimen in Wiesner's collection (JWC) would rather suggest *bipunctatus* to be larger in

size and with a sharp stronger sutural spine, thus more reminiscent of what we are calling here *pseudobipunctatus* (see below). The following species (*Th. flavilabris*) could well turn out to be conspecific and in such a case its name would obviously have priority; but the whole group would definitely need to be reviewed based on new materials from many different localities. Already recorded from Sulawesi Tenggara by CASSOLA (1996) and MATALIN (1998).

7. *Therates flavilabris* (Fabricius, 1801)

SULAWESI TENGGARA: 3.3 km SE Asera (N Kendari), 03°34.0S-122°08.1E, 45 m, 29.III.07, F. Cassola, 1 ♂ (FCC). 11 km SE Asera (N Kendari), 03°34.7S-122°09.2E, 210 m, 29.III.07, D. Brzoska, 1 ♂ 1 ♀ (DBC). *Ibid.*, 30.III.07, F. Cassola, 1 ♂ (FCC); D. Brzoska, 2 ♂♂ (DBC). 7.5 km E Kolaka on Kendari rd, 04°03.6S-121°42.0E, 80m, 26.III.07, F. Cassola, 1 ♂ 2 ♀♀ (FCC); D. Brzoska, 2 ♂♂ (DBC). Sumber Sari (S Kendari), Moramo Waterfalls, 04°13.6S-122°44.1E, 85 m, 9.IV.07, D. Brzoska, 1 ♂ 1 ♀ (DBC). Buton I., 6.6 km N Maligano, 04°21.1S-122°56.2E, 250 m, 4.IV.07, D. Brzoska, 1 ♀ (DBC). Buton I., 2.7 km SE Bukit Asri, 05°08.1S-122°52.3E, 455 m, 3.IV.07, D. Brzoska, 4 ♂♂ 1 ♀ (DBC). Buton I., N Waondo Wolio, 05°10.8S-122°52.3E, 310 m, 3.IV.07, D. Brzoska, 1 ♀ (DBC).

Specimens collected: 20.

According to WIESNER (1988), *Th. flavilabris* Fabricius, 1801 lacks any black area on elytra. However, as stated above, it could well turn out to be conspecific with *bipunctatus* and in such a case *flavilabris* would obviously have priority. As more material from various localities become available, this group will need to be reviewed in order to study differences in body size, shape of elytral spines and width/length of labrum.

8. *Therates latreillei latreillei* Thomson, 1860

SULAWESI UTARA: Tonbohon (N Manado), Danopola R., 01°34.7N-124°56.4E, 50 m, 28.III.06, D. Brzoska, 1 ♂ 1 ♀ (DBC). Rumong Atas (W Kawangkoan), Tunaan R., 01°13.6N-124°44.3E, 550 m, 1.IV.06, F. Cassola, 2 ♂♂ (FCC); D. Brzoska, 4 ♂♂ 1 ♀ (DBC). NE Mapolo, 00°59.9N-124°31.8E, 365 m, 2.IV.06, F. Cassola, 2 ♀♀ (FCC); D. Brzoska, 3 ♂♂ 5 ♀♀ (DBC). 4 km N Mapolo, Owasan R., 00°59.8N-124°31.4E, 286 m, 2.IV.06, D. Brzoska, 3 ♂♂ 3 ♀♀ (DBC). N Wujur (N Lake Mooat), Mahatus, 00°49.4N-124°26.4E, 1015 m, 2.IV.06, D. Brzoska, 4 ♂♂ 1 ♀ (DBC). Dumoga Bone NP, London R. (trib. of Tumpah R.), 00°34.6N-123°58.7E, 230 m, 3.IV.06, F. Cassola, 1 ♂ 4 ♀♀ (FCC); D. Brzoska, 2 ♂♂ (DBC). *Ibid.*, 00°34.6N-123°54.0E, 4.IV.06, D. Brzoska, 1 ♂ 1 ♀ (DBC).

1.5 km N Matayangan on Molibagu rd, 00°28.5N-123°58.3E, 225 m, 4.IV.06, D. Brzoska, 2 ♀♀ (DBC). 8.9 km N Molibagu, 00°26.6N-123°58.2E, 210 m, 5.IV.06, F. Cassola, 3 ♂♂ 4 ♀♀ (FCC); D. Brzoska, 15 ♂♂ 12 ♀♀ (DBC). 7.8 km N Molibagu, 00°25.9N-123°58.0E, 200 m, 5.IV.06, D. Brzoska, 1 ♀ (DBC).

SULAWESI TENGAH: 12 km SW Mapane on Watutau rd, 01°31.2S-120°37.9E, 3.V.05, 295 m, D. Brzoska, 2 ♀♀ (DBC). *Ibid.*, 13.IV.06, D. Brzoska, 3 ♂♂ 4 ♀♀ (DBC). 17.4 km SW Mapane on Watutau rd, 01°31.9S-120°37.5E, 360 m, 13.IV.06, F. Cassola, 1 ♀ (FCC). 40.2 km SW Mapane on Watutau rd, 01°35.3S-120°33.2E, 1090 m, 3.V.05, F. Cassola, 3 ♀♀ (FCC); D. Brzoska, 8 ♂♂ 3 ♀♀ (DBC). *Ibid.*, 13.IV.06, F. Cassola, 1 ♂ (FCC). W side of Lake Poso, W Tonusu, Saluopa Waterfall, 01°45.1S-120°32.4E, 555 m, 2.V.05, D. Brzoska, 3 ♀♀ (DBC). Tonusu, 6.9 km on Bada rd., 01°47.3S-120°30.1E, 1200 m, 12.IV.06, F. Cassola, 1 ♂ 1 ♀ (FCC). 5.2 km W Tonusu on Bada rd, 01°47.3S-120°30.7E, 1200 m, 1.V.05, F. Cassola, 1 ♂ (FCC); D. Brzoska, 1 ♂ 1 ♀ (DBC). 7.2 km W Tonusu on Bada rd, 01°47.5S-120°30.2E, 955 m, 12.IV.06, D. Brzoska, 3 ♂♂ 1 ♀ (DBC). W side of Lake Poso, Tonusu rd, 6 km S of Bada rd jct, 01°47.9S-120°31.8E, 525 m, 11.IV.06, D. Brzoska, 6 ♂♂ 3 ♀♀ (DBC).

SULAWESI BARAT: 23.9 km N Polewali on Mamasa rd, 03°18.9S-119°22.3E, 875 m, 28.IV.05, D. Brzoska, 1 ♂ 1 ♀ (DBC).

SULAWESI SELATAN: Cinda (NW Bantaeng), 03°29.8S-119°55.5E, 500 m, 13.III.07, D. Brzoska, 5 ♂♂ 1 ♀ (DBC). Allejang, 04°29.8S-119°44.7E, 280 m, 14.III.07, D. Brzoska, 1 ♀ (DBC). Bantaeng-Mt. Lompobattang, Sinoa R., 05°29.8S-115°55.4E, 500 m, 13.III.07, F. Cassola, 1 ♂ (FCC).

SULAWESI TENGGARA: 27.2 km W Kendari, 03°58.9S-122°22.4E, 28 m, 9.IV.07, D. Brzoska, 1 ♂ 1 ♀ (DBC). Huduriah R. (nr Kendari Airport), 04°05.7S-122°21.4E, 135 m, 1.IV.07, D. Brzoska, 1 ♂ 1 ♀ (DBC). *Ibid.*, 8.IV.07, D. Brzoska, 4 ♂♂ (DBC). Amowito Siana (nr Kendari Airport), 04°06.0S-122°22.8E, 155 m, 1.IV.07, D. Brzoska, 1 ♀ (DBC). Sumber Sari (S Kendari), Moramo Waterfalls, 04°13.6S-122°44.1E, 85 m, 31.III.07, F. Cassola, 1 ♀ (FCC); D. Brzoska, 1 ♂ 1 ♀ (DBC). *Ibid.*, 9.IV.07, D. Brzoska, 4 ♂♂ 3 ♀♀ (DBC). Buton I., 6.6 km N Maligano, 04°21.1S-122°56.2E, 250 m, 4.IV.07, D. Brzoska, 5 ♂♂ 3 ♀♀ (DBC). Buton I., Wakarumba, 04°56.3S-122°50.4E, 20 m, 5.IV.07, D. Brzoska, 4 ♂♂ 4 ♀♀ (DBC). Buton I., 8 km S Bone, 05°04.7S-122°48.1E, 25 m, 3.IV.07, D. Brzoska, 1 ♀ (DBC). Buton I., 2.7 km SE Bukit Asri, 05°08.1S-122°52.3E, 455 m, 3.IV.07, D. Brzoska, 10 ♂♂ 3 ♀♀ (DBC). Buton I., N Waondo Wolio, 05°09.1S-122°53.6E, 390 m, 3.IV.07, D. Brzoska, 2 ♂♂ 2 ♀♀ (DBC). Buton I., N Waondo Wolio, 05°10.8S-122°52.3E, 310 m, 3.IV.07, D. Brzoska, 1 ♂ 3 ♀♀ (DBC).

Specimens collected: 189.

According to WIESNER's (1988) key to the species of the *fasciatus* group, *Th. latreillei* would basically differ from *fasciatus* by the black sternum and metepisterna. Moreover, a ssp. *brevispinosus* W. Horn, 1896 would occur in the Sangihe Is. (Sulawesi Utara). However, most of the specimens mentioned above have, in contrast, testaceous or slightly darkened sternum and metepisterna. In our opinion, the most important characters for separating *latreillei* from

fasciatus are to be found in the slightly larger average body size and the sharper, longer, subtriangular sutural spine. The actual status of *brevispinosus* needs to be reviewed. New to Sulawesi Barat, Sulawesi Selatan and Sulawesi Tenggara.

9. *Therates pseudobipunctatus* Wiesner, 1988, **bona** sp.

SULAWESI TENGAH: 38 km SW Mapane on Watutau rd, 01°35.6S-120°33.3E, 1090 m, 13.IV.06, D. Brzoska, 1 ♀ (DBC). NW side of Lake Poso, 6.9 km W Tonusu on Bada rd, 01°47.3S-120°30.2E, 1200 m, 1.V.05, D. Brzoska, 1 ♂ 2 ♀♀ (DBC). NW side of Lake Poso, 5.2 km W Tonusu on Bada rd, 01°47.3S-120°30.7E, 1200 m, 1.V.05, F. Cassola, 1 ♂ (FCC); D. Brzoska, 4 ♂♂ 3 ♀♀ (DBC). NW side of Lake Poso, 7.2 km W Tonusu on Bada rd, 01°47.5S-120°30.2E, 955 m, 12.IV.06, D. Brzoska, 2 ♂♂ 3 ♀♀ (DBC). NW side of Lake Poso, 10.4 km W Tonusu on Bada rd, 01°47.8S-120°29.5E, 1125 m, 12.IV.06, F. Cassola, 1 ♂ (FCC); D. Brzoska, 3 ♂♂ 3 ♀♀ (DBC). W side of Lake Poso, Tonusu rd, 6 km S of Bada rd jct, 01°47.9S-120°31.8E, 525 m, 11.IV.06, F. Cassola, 4 ♀♀ (FCC); D. Brzoska, 7 ♂♂ 14 ♀♀ (DBC). N Wotu, 02°20.3S-120°47.5E, 550 m, 30.IV.05, F. Cassola, 1 ♂ (FCC); D. Brzoska, 1 ♀ (DBC).

SULAWESI SELATAN: 3.5 km N Malili on Laora rd, 02°34.2S-121°06.3E, 130 m, 23.III.07, D. Brzoska, 2 ♂♂ (DBC). 20 km W Soroako, 02°35.2S-121°18.6E, 500 m, 23.III.07, F. Cassola, 2 ♂♂ (FCC); D. Brzoska, 5 ♂♂ 4 ♀♀ (DBC). 40.5 km W Soroako, 02°39.3S-121°11.3E, 170 m, 23.III.07, D. Brzoska, 1 ♂ (DBC). 21 km S Soroako on Kolaka rd, 02°46.7S-121°03.5E, 135 m, 24.III.07, D. Brzoska, 2 ♂♂ (DBC). 28.3 km S Soroako on Kolaka rd, 02°49.4S-121°03.7E, 85 m, 24.III.07, D. Brzoska, 1 ♀ (DBC). Torajaland, 19.5 km E Rantepao on Palopo rd, 02°56.3S-120°01.8E, 565 m, 24.IV.05, F. Cassola, 3 ♂♂ (FCC); D. Brzoska, 4 ♂♂ 3 ♀♀ (DBC). Torajaland, 28 km E Rantepao on Palopo rd, 02°57.3S-120°04.2E, 1120 m, 24.IV.05, D. Brzoska, 2 ♂♂ (DBC).

SULAWESI TENGGARA: 5.6 km SE Asera (N Kendari), 03°34.4S-122°08.4E, 70 m, 29.III.07, D. Brzoska, 1 ♂ 3 ♀♀ (DBC). 11 km SE Asera (N Kendari), 03°34.7S-122°09.2E, 210 m, 29.III.07, D. Brzoska, 2 ♂♂ 2 ♀♀ (DBC). *Ibid.*, 30.III.07, D. Brzoska, 1 ♂ 1 ♀ (DBC). Sila (NW Kolaka), Sila R., 03°42.7S-121°05.0E, 28 m, 25.III.07, D. Brzoska, 2 ♀♀ (DBC). 27.2 km W Kendari, 03°58.9S-122°22.4E, 28 m, 28.III.07, D. Brzoska, 1 ♂ 1 ♀ (DBC). *Ibid.*, 9.IV.07, D. Brzoska, 1 ♂ (DBC). 10.3 km E Kolaka on Kendari rd, 04°02.7S-121°42.6E, 180 m, 26.III.07, D. Brzoska, 2 ♂♂ 2 ♀♀ (DBC). Huduriah R. (nr Kendari Airport), 04°05.7S-122°21.4E, 135 m, 8.IV.07, D. Brzoska, 2 ♂♂ (DBC). Sumber Sari (S Kendari), Moramo Waterfalls, 04°13.6S-122°44.1E, 85 m, 31.III.07, D. Brzoska, 1 ♂ (DBC). *Ibid.*, 9.IV.07, D. Brzoska, 1 ♂ (DBC). 2.3 km S Kolaka, 04°56.7S-121°05.6E, 20 m, 24.III.07, D. Brzoska, 1 ♂ (DBC). Buton I., 2.7 km SE Bukit Asri, 05°08.1S-122°52.3E, 455 m, 3.IV.07, D. Brzoska, 1 ♂ (DBC).

Specimens collected: 107.

Because of the average larger size, the sharp and longer elytral spine, and the larger, almost squared, shining black area in the middle

of elytra, we think the above mentioned specimens to be *pseudobipunctatus*, an allegedly *latreillei* subspecies which was described from the Poso area based on two specimens only (WIESNER 1988). As previously stated for *latreillei*, many of the above mentioned specimens have testaceous instead of black sternum and metepisterna. However, if future researches will show these specimens to be *bipunctatus* instead, *pseudobipunctatus* would merely become a junior synonym of *bipunctatus*, and the form close to *fasciatus* which we have above ascribed to *bipunctatus* would require a new specific name. Anyway, since both *latreillei* and *pseudobipunctatus* were found in the very same region, and even syntopically living at least in two localities (W of Tonusu on the Bada road), the subspecific status of *pseudobipunctatus* cannot obviously be retained, thus inducing us to give this taxon a full specific status. New to Sulawesi Selatan and Sulawesi Tenggara.

10. *Therates payeni* Van der Linden, 1829

SULAWESI UTARA: W of Kawangkoan, Rumoong Atas, Tuunan R., 01°13.6N-124°44.3E, 550 m, 1.IV.06, D. Brzoska, 3 ♂♂ (DBC). NE Mapolo, 00°59.9N-124°31.8E, 366 m, 2.IV.06, D. Brzoska, 2 ♂♂ (DBC). N of Lake Mooat, N Wujur, Mahatus, 00°49.4N-124°26.4E, 1015 m, 2.IV.06, D. Brzoska, 8 ♂♂ 5 ♀♀ (DBC). 8.9 km N Molibagu, 00°26.6N-123°58.2E, 210 m, 5.IV.06, D. Brzoska, 1 ♂ (DBC).

SULAWESI TENGAH: SW of Tolitoli, 2.5 km S "km 4-Basidondo", 00°43.3N-120°37.0E, 100 m, 9.IV.06, D. Brzoska, 2 ♂♂ (DBC). 24.3 km S "km 4-Basidondo", 00°37.2N-120°39.8E, 1040 m, 8.IV.06, F. Cassola, 3 ♂♂ (FCC); D. Brzoska, 11 ♂♂ 7 ♀♀ (DBC). 10.7 km NW Sedoa on Wuasa-Palu rd, 01°18.3S-120°16.7E, 1410 m, 4.V.05, D. Brzoska, 1 ♂ 1 ♀ (DBC). *Ibid.*, 14.IV.06, D. Brzoska, 1 ♂ (DBC). S of Palu, 12 km N Kulawi on Gimpu rd, 01°21.4S-119°58.4E, 400 m, 6.V.05, D. Brzoska, 9 ♂♂ 2 ♀♀ (DBC). 6.5 km NW Wuasa, 01°22.2S-120°19.4E, 1175 m, 4.V.05, D. Brzoska, 10 ♂♂ 6 ♀♀ (DBC). *Ibid.*, 14.IV.06, D. Brzoska, 2 ♂♂ 1 ♀ (DBC). 11 km N Gimpu, 01°31.8S-120°00.7E, 620 m, 5.V.05, D. Brzoska, 6 ♂♂ 4 ♀♀ (DBC). 6 km N Gimpu, 01°33.8S-120°01.4E, 530 m, 5.V.05, D. Brzoska, 2 ♂♂ 3 ♀♀ (DBC). 5 km N Gimpu, 01°34.0S-120°01.4E, 520 m, 5.V.05, F. Cassola, 1 ♂ 1 ♀ (FCC); D. Brzoska, 2 ♂♂ 2 ♀♀ (DBC). 40.2 km SW Mapane on Watutau rd, 01°35.3S-120°33.2E, 1090 m, 3.V.05, F. Cassola, 2 ♂♂ (FCC). 6 km S Gimpu, stream Halu (trib. of Lariang R.), 01°40.2S-120°02.5E, 400 m, 5.V.05, F. Cassola, 1 ♂ (FCC); D. Brzoska, 2 ♂♂ (DBC). NW side of Lake Poso, 6.9 km W Tonusu on Bada rd, 01°47.3S-120°30.2E, 1200 m, 1.V.05, D. Brzoska, 1 ♂ (DBC). *Ibid.*, 12.IV.06, F. Cassola, 1 ♂ (FCC). NW side of Lake Poso, 10.4 km W Tonusu on Bada rd, 01°47.8S-120°29.6E, 1125 m, 12.IV.06, D. Brzoska, 1 ♀ (DBC).

SULAWESI BARAT: 23.9 km N Polewali on Mamasa rd, 03°18.9S-119°22.3E, 875 m, 28.IV.05, F. Cassola, 1 ♂ (FCC); D. Brzoska, 8 ♂♂ 5 ♀♀ (DBC). *Ibid.*, 16.III.07,

F. Cassola, 2 ♂♂ (FCC); D. Brzoska, 4 ♂♂ 3 ♀♀ (DBC). *Ibid.*, 20.III.07, F. Cassola, 1 ♀ (FCC); D. Brzoska, 3 ♂♂ 7 ♀♀ (DBC):

Specimens collected: 136.

Apparently a Sulawesi endemic, as Van der Linden's type locality ("Ceram") is most probably erroneous (CASSOLA 1991). This species, obviously close to *latreillei*, is quite easily recognizable because of the black metasternum and metepisterna, the rather sharp sutural spine, the metallic black elytra with widely rufescent apex, and the rufescent humeral area which covers the basal callus but keeps the suture narrowly black until the scutellum. However, the character controlling the black colour of the metasternal pieces does not seem to be so well fixed, as a few specimens (about one quarter of the examined ones) have more or less testaceous sternum and metepisterna. New to Sulawesi Barat.

11. *Therates punctatoviridis* W. Horn, 1933

SULAWESI UTARA: N Wujur (N Lake Moaat), Mahatus, 00°49.4N-124°26.4E, 1015 m, 2.IV.06, F. Cassola, 1 ♀ (FCC); D. Brzoska, 1 ♂ 1 ♀ (DBC).

SULAWESI TENGAH: 10.7 km NW Sedoa on Wuasa-Palu rd, 01°18.3S-120°16.7E, 1410 m, 4.V.05, D. Brzoska, 1 ♀ (DBC). *Ibid.*, 14.IV.06, F. Cassola, 2 ♂♂ (FCC); D. Brzoska, 2 ♂♂ (DBC).

SULAWESI BARAT: 10 km S Malabo on Polewali-Mamasa rd, 03°03.9S-119°19.3E, 1030 m, 18.III.07, D. Brzoska, 2 ♂♂ 1 ♀ (DBC). 23.9 km N Polewali on Mamasa rd, 03°18.9S-119°22.3E, 875 m, 28.IV.05, F. Cassola, 1 ♂ (FCC); D. Brzoska, 1 ♂ (DBC). *Ibid.*, 20.III.07, F. Cassola, 1 ♂ (FCC); D. Brzoska, 2 ♂♂ 3 ♀♀ (DBC).

Specimens collected: 19.

Very similar to the preceding species, and also a Sulawesi endemic, this species can be separated from *payeni* by a marked golden-green metallic hue on elytra, and by the yellow (not rufescent) humeral spot which is normally bifurcated on the basal callus and makes it partially black. However, this last character does not seem to be very reliable as a few *payeni* specimens have the humeral spot similarly shaped. We have found both species syntopically occurring near Sedoa and at 23.9 km N of Polewali, which seems to strengthen their specific separation. New to Sulawesi Barat.

12. *Therates labiatus* (Fabricius, 1801) (figs 10-12)

SULAWESI UTARA: Tonbohon (N Manado), Danopola R., 01°34.7N-124°56.4E, 50 m, 28.III.06, F. Cassola, 1 ♂ (FCC); D. Brzoska, 1 ♂ 2 ♀♀ (DBC). N Bitung on Pinenek rd, 01°33.7N-125°07.0E, 120 m, 29.III.06, D. Brzoska, 4 ♂♂ (DBC). N Tondano on Sampiri rd, 01°23.1N-124°56.0E, 285 m, 30.III.06, D. Brzoska, 2 ♂♂ (DBC). NE Tondano on Airmadidi rd, 01°19.8N-124°55.5E, 680 m, 30.III.06, F. Cassola, 1 ♂ (FCC); D. Brzoska, 1 ♂ (DBC). Romoong Atas (W Kawangkoan), Tunaan R., 01°13.6N-124°44.3E, 550 m, 1.IV.06, F. Cassola, 1 ♂ (FCC); D. Brzoska, 5 ♂♂ 5 ♀♀ (DBC). Kiawa II, Ranowangko R., 01°12.7N-124°47.4E, 675 m, 31.III.06, F. Cassola, 3 ♂♂ (FCC); D. Brzoska, 3 ♂♂ 2 ♀♀ (DBC). 4 km N Mapolo, Owasaan R., 00°59.8N-124°31.4E, 285 m, 2.IV.06, F. Cassola, 2 ♀♀ (FCC); D. Brzoska, 3 ♂♂ (DBC). Dumoga Bone NP, London R. (trib. of Tumpah R.), 00°34.6N-123°54.0E, 230 m, 3-4.IV.06, F. Cassola, 3 ♂♂ 7 ♀♀ (FCC); D. Brzoska, 7 ♂♂ 6 ♀♀ (DBC). 1.5 km N Matayangan on Molibagu rd, 00°28.5N-123°58.3E, 225 m, 4.IV.06, D. Brzoska, 10 ♂♂ 4 ♀♀ (DBC). 10.2 km N Molibagu, 00°27.1N-123°58.1E, 215 m, 4.IV.06, F. Cassola, 1 ♂ 1 ♀ (FCC); D. Brzoska, 4 ♂♂ 2 ♀♀ (DBC). 8.9 km N Molibagu, 00°26.6N-123°58.2E, 210 m, 5.IV.06, F. Cassola, 2 ♂♂ 3 ♀♀ (FCC); D. Brzoska, 2 ♀♀ (DBC). 7.8 km N Molibagu, 200 m, 00°25.9N-123°58.0E, 5.IV.06, D. Brzoska, 2 ♂♂ (DBC). 2 km E Tolutu (W Molibagu), 00°19.3N-123°45.1E, 10 m, 5.IV.06, D. Brzoska, 3 ♂♂ (DBC).

GORONTALO: Bakti (W Isimu), Kurakura R., 00°38.2N-122°45.9E, 80 m, 7.IV.06, D. Brzoska, 1 ♂ (DBC). Tutulo (E Gorontalo), 00°30.9N-123°14.4E, 75 m, 6.IV.06, F. Cassola, 1 ♂ 1 ♀ (FCC); D. Brzoska, 5 ♂♂ (DBC). Tulabolo (E Gorontalo), 00°30.5N-123°15.4E, 68m, 6.IV.06, D. Brzoska, 4 ♂♂ 1 ♀ (DBC).

SULAWESI TENGAH: 2.5 km S "km 4-Basidondo" (SW Tolitoli), 00°43.3N-120°37.0E, 100 m, 9.IV.06, F. Cassola, 1 ♂ 1 ♀ (FCC); D. Brzoska, 2 ♂♂ 1 ♀ (DBC). 5.8 km S "km 4-Basidondo" (SW Tolitoli), 00°42.5N-120°37.5E, 135 m, 9.IV.06, F. Cassola, 3 ♂♂ 4 ♀♀ (FCC); D. Brzoska, 7 ♂♂ 3 ♀♀ (DBC). Ongka (W Moutong), 00°29.2N-120°48.8E, 70 m, 8.IV.06, F. Cassola, 1 ♀ (FCC); D. Brzoska, 1 ♂ 1 ♀ (DBC). 35 km NW Mapane, Tambarana on Tinombo-Poso rd, 01°13.7S-120°33.5E, 28 m, 10.IV.06, F. Cassola, 2 ♂♂ 3 ♀♀ (FCC). S of Palu, 12 km N Kulawi on Gimpu rd (S Palu), 01°21.4S-119°58.4E, 400 m, 6.V.05, F. Cassola, 6 ♂♂ 11 ♀♀ (FCC); D. Brzoska, 22 ♂♂ 17 ♀♀ (DBC). *Ibid.*, 15.IV.06, F. Cassola, 5 ♂♂ 3 ♀♀ (FCC). 6.5 km NW Wuasa, 01°22.2S-120°19.4E, 1175 m, 4.V.05, D. Brzoska, 2 ♂♂ 2 ♀♀ (DBC). *Ibid.*, 14.IV.06, 1175 m, D. Brzoska, 2 ♂♂ (DBC). 3 km S Kulawi on Gimpu rd (S Palu), 01°27.2S-119°59.0E, 620 m, 6.V.05, F. Cassola, 1 ♂ 2 ♀♀ (FCC); D. Brzoska, 5 ♂♂ 3 ♀♀ (DBC). *Ibid.*, 15.IV.06, F. Cassola, 2 ♀♀ (FCC). 12 km S of Mapane on Watutau rd, 01°31.2S-120°37.9E, 295 m, 3.V.05, D. Brzoska, 1 ♂ (DBC). 11 km N Gimpu (S Palu), 01°31.4S-120°01E, 620 m, 5.V.05, F. Cassola, 4 ♂♂ 4 ♀♀ (FCC); D. Brzoska, 13 ♂♂ 10 ♀♀ (DBC). 6 km N Gimpu (S Palu), 01°33.5S-120°01.2E, 530 m, 5.V.05, F. Cassola, 7 ♂♂ 2 ♀♀ (FCC); D. Brzoska, 17 ♂♂ 10 ♀♀ (DBC). 5 km N Gimpu (S Palu), 01°34.0S-120°01.4E, 520 m, 5.V.05, F. Cassola, 1 ♂ 2 ♀♀ (FCC); D. Brzoska, 7 ♂♂ 2 ♀♀ (DBC). 6 km S Gimpu (S Palu), stream Halu (trib. of Lariang R.), 01°40.2S-120°02.5E, 400 m, 5.V.05, F. Cassola, 12 ♂♂ 7 ♀♀ (FCC); D. Brzoska, 7 ♂♂ 9 ♀♀ (DBC). NW side of Lake Poso, Tonusu, 6.9 km on Bada rd, 01°47.3S-120°30.2E, 1200 m, 1.V.05, D. Brzoska, 1 ♂ (DBC). W side of Lake Poso, Tonusu rd, 6 km S of Bada rd jct, 01°47.9S-120°31.8E, 525 m, 1.V.05, F. Cassola, 2 ♂♂ 1 ♀ (FCC); D. Brzoska, 16 ♂♂ 7 ♀♀ (DBC).

Ibid., 11.IV.06, F. Cassola, 3 ♂♂ 1 ♀ (FCC); D. Brzoska, 4 ♂♂ 2 ♀♀ (DBC). W side of Lake Poso, Siuri Resort, 01°48.2S-120°31.7E, 500 m, 12.IV.06, D. Brzoska, 1 ♀ (DBC).

SULAWESI BARAT: Mambu-Tapua (E Polewali), Tolo R., 03°15.3S-119°15.4E, 350 m, 19.III.07, F. Cassola, 2 ♂♂ 1 ♀ (FCC). *Ibid.*, 19.III.07, D. Brzoska, 2 ♂♂ 3 ♀♀ (DBC). Lemogamba (NE Polewali), Salindu R., 03°21.4S-119°17.3E, 32 m, 19.III.07, D. Brzoska, 1 ♀ (DBC).

SULAWESI SELATAN: Bulu Dua (E Tanete), Siri R., 04°30.3S-119°47.2E, 700 m, 22.IV.05, D. Brzoska, 1 ♂ 3 ♀♀ (DBC). Maroso (S Malili), Lanteani R., 03°39.6S-121°02.7E, 24 m, 25.III.07, F. Cassola, 1 ♂ (FCC). 35.2 km W Soroako, 02°38.0S-121°12.9E, 135m, 23.III.07, D. Brzoska, 4 ♂♂ 2 ♀♀ (DBC). 20 km W Soroako, 02°35.2S-121°18.6E, 500 m, 23.III.07, F. Cassola, 1 ♂ (FCC). *Ibid.*, 23.III.07, D. Brzoska, 2 ♂♂ 2 ♀♀ (DBC).

SULAWESI TENGGARA: 2 km E Kolaka on Kendari rd, 02°55.8S-121°06.7E, 52m, 24.III.07, D. Brzoska, 1 ♂ 1 ♀ (DBC). Sila (NW Kolaka), Sila R., 03°42.7S-121°05.0E, 28 m, 25.III.07, F. Cassola, 1 ♂ (FCC). 7.5 km E Kolaka, 04°03.6S-121°42.0E, 80m, 26.III.07, F. Cassola, 1 ♀ (FCC). 10.3 km E of Kolaka on Kendari rd, Palabo R., 04°02.7S-121°42.6E, 180 m, 26.III.07, F. Cassola, 1 ♂ (FCC); D. Brzoska, 2 ♀♀ (DBC). Amowito, Siama (nr Kendari airport), 04°06.0S-122°22.8E, 155 m, 31.III.07, F. Cassola, 1 ♀ (FCC). *Ibid.*, 1.IV.07, D. Brzoska, 2 ♂♂ (DBC). Sumber Sari (S Kendari), Moramo Waterfalls, 04°13.6S-122°44.1E, 85 m, 31.III.07, F. Cassola, 1 ♂ (FCC); D. Brzoska, 4 ♂♂ 1 ♀ (DBC). *Ibid.*, 9.IV.07, D. Brzoska, 5 ♂♂ 5 ♀♀ (DBC). Buton I., 8 km N Maligano, 04°21.1S-122°56.2E, 250m, 4.IV.07, D. Brzoska, 2 ♂♂ 1 ♀ (DBC). Buton I., 12.3 km N Maligano, 04°42.1S-122°56.2E, 70m, 4.IV.07, D. Brzoska, 1 ♀ (DBC). Buton I., 19 km N Maligano, 04°44.5S-122°57.7E, 40m, 4.IV.07, D. Brzoska, 2 ♂♂ (DBC). Buton I., Wakarumba, 04°56.3S-122°50.4E, 20m, 5.IV.07, D. Brzoska, 2 ♂♂ 1 ♀ (DBC). Buton I., Lambusango (N Baubau), 05°14.8S-122°27.0E, 25m, 2.IV.07, D. Brzoska, 1 ♂ (DBC).

Specimens collected: 431.

The type of the genus *Therates* Latreille, 1817, *Th. labiatus* (Fabricius, 1801) is a large, conspicuous and very common species (figs 10-11). When approached while sitting on leaves (usually facing the collector), it is very conspicuous because of its large size and the fully black-violet body colour with a shiny yellow labrum (fig. 12). However, it is a very strong flier, quite difficult to catch. New to Gorontalo and Sulawesi Barat.

13. *Hipparidium heros* (Fabricius, 1801) (fig. 2)

SULAWESI UTARA: NE Tondano on Airmaididi rd, 01°19.8N-124°55.5E, 680 m, 30.III.06, D. Brzoska, 2 ♂♂ (DBC). San Dangan nr Kakas (SW Tondano), 01°09.7N-124°53.3E, 720 m, 30.III.06, D. Brzoska, 1 ♀ (DBC). 8.9 km N Molibagu, 00°26.6N-123°58.2E, 210 m, 5.IV.06, D. Brzoska, 2 ♂♂ (DBC).

GORONTALO: Dutabo (E Gorontalo), 00°33.1N-123°09.7E, 102 m, 6.IV.06, F. Cassola, 1 ♂ (FCC). Tutulo (E Gorontalo), 00°30.9N-123°14.4E, 75 m, 6.IV.06, F. Cassola, 1 ♂ (FCC); D. Brzoska, 3 ♂♂ 2 ♀♀ (DBC). Tulabolo (E Gorontalo), 00°30.5N-123°15.4E, 68 m, 6.IV.06, D. Brzoska, 2 ♂♂ (DBC).

SULAWESI TENGAH: 5.2 km W Pandiri on Poso rd, 01°28.2S, 120°46.0E, 20 m, 2.V.05, D. Brzoska, 1 ♀ (DBC). *Ibid.*, 11.IV.06, D. Brzoska, 1 ♀ (DBC). 7.8 km N Tentena, 01°40.6S-120°39.4E, 540 m, 2.V.05, F. Cassola, 3 ♂♂ (FCC); D. Brzoska, 10 ♂♂ 7 ♀♀ (DBC).

SULAWESI BARAT: 31.4 km N Polewali on Mamasa rd, nr Masawa, 03°17.2S-119°22.0E, 995 m, 16.III.07, D. Brzoska, 1 ♂ (DBC).

SULAWESI SELATAN: Bambalu (W Palopo), 02°57.3S-120°05.7E, 795 m, 24.IV.05, D. Brzoska, 1 ♀ (DBC).

SULAWESI TENGGARA: 8.5 km S Sawa (N Kendari), 03°49.5S-122°24.7E, 15m, 28.III.07, D. Brzoska, 1 ♂ (DBC). 43 km W Kendari, 03°58.0S-122°15.4E, 35m, 28.III.07, D. Brzoska, 1 ♀ (DBC). 27.2 km W Kendari, 03°58.9S-122°22.4E, 28m, 30.III.07, D. Brzoska, 1 ♂ (DBC). 10.3 km E Kolaka on Kendari rd, 04°02.7S-121°42.6E, 180m, 26.III.07, D. Brzoska, 1 ♀ (DBC). Huduriah R. (nr Kendari Airport), 04°05.7S-122°21.4E, 135m, 1.IV.07, D. Brzoska, 3 ♂♂ 1 ♀ (DBC). *Ibid.*, 8.IV.07, D. Brzoska, 1 ♂ 2 ♀♀ (DBC). Amowito Siama (nr Kendari Airport), 04°06.0S-122°22.8E, 155m, 1.IV.07, D. Brzoska, 3 ♂♂ (DBC). Sumber Sari (S Kendari), Moramo Waterfalls, 04°13.6S-122°44.1E, 85 m, 31.III.07, F. Cassola, 1 ♂ 1 ♀; 31.III.07, D. Brzoska, 7 ♂♂ 1 ♀ (DBC). *Ibid.*, 9.IV.07, D. Brzoska, 7 ♂♂ 8 ♀♀ (DBC).

Specimens collected: 77.

A large, conspicuous, endemic species, which was found to occur in forest habitats along shaded trails, where it strongly flies along the forest floor and sometimes perches on leaves or even vertical tree trunks (fig. 2). This species seems to show some variation in overall size (the specimens from northern Sulawesi being smaller than the others) and the presence of hairs on the sides of the pronotum. In most specimens this is glabrous, but other specimens have a row of hairs. A puzzling male specimen from Sulawesi Barat differs from the others because of the elytral maculation with a more acute middle band and for the greenish, instead of brown, elytral ground colour, thus giving the strong impression of being a different species. However, a female specimen in FCC, from Palu, having a similarly shaped middle band, exhibits a dark brown elytral ground colour. Therefore we are refraining from describing this specimen as a new species, waiting for additional specimens. However, an additional species, *H. shinjii*, was described by SAWADA & WIESNER (2000) from South Sulawesi (Mt. Lompobattang area). These two Sulawesi endemic species appear to be rather puzzling

zoogeographically, as they are the only Asiatic representants of a primarily African and Malagasy genus, *Hipparidium* Jeannel, 1946. New to Gorontalo and Sulawesi Barat.

14. *Calomera funerea* (Macleay) ssp. *multinotata* (Fabricius, 1801) (fig. 3)

GORONTALO: Bakti (W Isimu), Kurakura R., 00°38.2N-122°45.9E, 80m, 7.IV.06, D. Brzoska, 11 ♂♂ 11 ♀♀ (DBC). Ulawa (N Marisa), Tolodayuno R., 00°32.5N-121°58.3E, 50 m, 7.IV.06, F. Cassola, 7 ♂♂ (FCC); D. Brzoska, 1 ♂ 1 ♀ (DBC).

SULAWESI TENGAH: 6 km S Gimpu (S Palu), stream Halu (trib. of Lariang R.), 01°40.4S-120°02.9E, 400 m, 5.V.05, F. Cassola, 2 ♂♂ 2 ♀♀ (FCC); D. Brzoska, 1 ♂ 3 ♀♀ (DBC). W side of Lake Poso, Siuri Resort, 01°48.2S-120°31.7E, 520 m, 1.V.05, D. Brzoska, 20 ♂♂ 29 ♀♀ (DBC).

SULAWESI BARAT: 37 km N Polewali on Mamasa R., 03°15.4S-119°20.6E, 885 m, 26.IV.05, F. Cassola, 3 ♂♂ (FCC).

SULAWESI SELATAN: Malalang (50 km E Makassar), Janabarang R., 05°16.2S-119°43.8E, 220 m, 18.IV.05, F. Cassola, 6 ♂♂ 5 ♀♀ (FCC); D. Brzoska, 7 ♂♂ 5 ♀♀ (DBC). *Ibid.*, 11.III.07, F. Cassola, 11 ♂♂ 12 ♀♀ (FCC). Bonto Jai Desa, Bori Sallo Kelamatan Parang Loe, Kabudaten Gowa, Rakiakang R., 05°15.1S-119°40.8E, 140 m, 18.IV.05, F. Cassola, 7 ♂♂ 10 ♀♀ (FCC); D. Brzoska, 6 ♂♂ 5 ♀♀ (DBC). 4 km SW Camba, Timpussang R., 04°56.8S-119°49.0E, 365 m, 21.IV.05, D. Brzoska, 1 ♂ 1 ♀ (DBC). 4 km SW Enrekang, Sadang R., 03°35.0S-119°45.8E, 60 m, 23.IV.05, D. Brzoska 16 ♂♂ 10 ♀♀ (DBC). Torajaland, Rantepao-Palopo, 02°56.9S-120°01.5E, 555 m, 24.IV.05, F. Cassola, 1 ♀ (FCC).

SULAWESI TENGGARA: 5 km SE Asera (N Kendari), 03°34.0S-122°08.1E, 42m, 29.III.07, D. Brzoska, 5 ♂♂ (DBC). Langkowala, 04°35.6S-121°59.5E, 20m, 7.IV.07, D. Brzoska, 27 ♂♂ 24 ♀♀ (DBC). Buton I., 12.3 km N Maligano, 04°42.1S-122°56.2E, 70m, 4.IV.07, D. Brzoska, 1 ♂ 1 ♀ (DBC). Buton I., Wambona R., 04°51.0S-122°49.9E, 12m, 4.IV.07, D. Brzoska, 16 ♂♂ 13 ♀♀ (DBC).

Specimens collected: 288.

Apparently a valid subspecies (endemic to Sulawesi and Borneo) of a widespread South East Asian species which is known to inhabit the whole region between northern India and Nepal to Indochina and the Sunda Islands (CASSOLA 1991). However, most of our specimens have elytral markings that more closely resemble the typical form. We have found *funerea* to be common and abundant on river sandbars (fig. 3), as well as on the sandy shore of Lake Poso. In contrast, we didn't find the congeneric *C. opigrapha* (Dejean, 1831), that is common in Borneo but apparently is also known from

Sulawesi (CASSOLA 1991). New to Gorontalo, Sulawesi Barat and Sulawesi Tenggara.

15. *Calomera decemguttata* (Fabricius, 1801)

SULAWESI UTARA: Tonkenia (N Manado), 01°34.2N-124°48.4E, 1 m, mangrove beach, 28.III.06, F. Cassola, 1 ♂ 1 ♀ (FCC); D. Brzoska, 3 ♂♂ 3 ♀♀ (DBC). Bengkol, Kima Atas R., 01°34.1N-124°53.5E, 120 m, 28.III.06, F. Cassola, 1 ♂ 9 ♀♀ (FCC); D. Brzoska, 5 ♂♂ 3 ♀♀ (DBC). N Bitung on Pinenek rd, 01°33.7N-125°07.0E, 120 m, 29.III.06, D. Brzoska, 2 ♂♂ 1 ♀ (DBC). N Bitung on Tangkoko rd, S Batu Putih, 01°33.4N-125°08.0E, 35 m, 29.III.06, F. Cassola, 3 ♂♂ 1 ♀ (FCC); D. Brzoska, 8 ♂♂ 6 ♀♀. E Tomohon, 01°22.6N-124°50.5E, 700 m, 31.III.06, D. Brzoska, 1 ♂ (DBC). Molobog-Kotamobagu, 1.IV.06, F. Cassola, 1 ♂ (FCC). 2 km E Kawangkoan, 01°12.2N-124°47.0E, 715 m, 1.IV.06, D. Brzoska, 2 ♀♀ (DBC). SW Amurang, 01°10.3N-124°25.7E, 50 m, 1.IV.06, D. Brzoska, 5 ♂♂ 2 ♀♀ (DBC). NE Mapolo, 366 m, 00°59.9N-124°31.8E, 2.IV.06, D. Brzoska, 1 ♂ (DBC). Dumoga-Bone NP, London R. (trib. of Tunpah R.), 00°34.6N-123°54.0E, 230 m, 3-4.IV.06, D. Brzoska, 3 ♂♂ 2 ♀♀ (DBC). 7.8 km N Molibagu, 00°25.9N-123°58.0E, 200 m, 5.IV.06, D. Brzoska, 3 ♂♂ 1 ♀ (DBC).

GORONTALO: Bakti (W Isimu), Kurakura R., 00°38.3N-122°45.8E, 80 m, 7.IV.06, F. Cassola, 12 ♂♂ 5 ♀♀ (FCC). Bakti (W Isimu), Kurakura R., 00°38.2N-122°45.9E, 80 m, 7.IV.06, D. Brzoska, 12 ♂♂ 9 ♀♀ (DBC). 1 km E Karya Indah, 00°37.5N-122°38.8E, 67 m, 7.IV.06, F. Cassola, 1 ♂ (FCC). Ulawa (N Marisa), Tolodayuno R., 00°32.3N-121°58.2E, 50 m, 7.IV.06, F. Cassola, 1 ♂ (FCC); D. Brzoska, 1 ♂ 1 ♀ (DBC). Tulabolo (E Gorontalo), 00°30.5N-123°15.4E, 68 m, 6.IV.06, D. Brzoska, 2 ♂♂ (DBC).

SULAWESI TENGAH: Ongka (W Moutong), 00°29.2N-120°48.8E, 70 m, 8.IV.06, F. Cassola, 1 ♂ (FCC). 12 km N Kulawi on Gimpu rd (S Palu), 01°21.4S-119°58.4E, 400 m, 6.V.05, F. Cassola, 1 ♂ 1 ♀ (FCC); D. Brzoska, 2 ♂♂ 1 ♀ (DBC). *Ibid.*, 15.IV.06, F. Cassola, 2 ♂♂ (FCC). 6.5 km W Poso, Tomini Bay, 01°24.2S-120°42.8E, 1 m, 13.IV.06, D. Brzoska, 1 ♀ (DBC). S of Palu, 3 km S Kulawi on Gimpu rd (S Palu), 01°27.2S-119°59.0E, 620 m, 15.IV.06, F. Cassola, 4 ♂♂ (FCC). 5.2 km N Pandiri on Poso rd, 01°28.2S-120°46.0E, 500 m, 2.V.05, F. Cassola, 1 ♀ (FCC); D. Brzoska, 1 ♂ (DBC). *Ibid.*, 11.IV.06, D. Brzoska, 2 ♂♂ (DBC). 6 km N Gimpu (S Palu), 01°33.8S-120°01.4E, 530 m, 5.V.05, D. Brzoska, 2 ♂♂ 1 ♀ (DBC). 6 km S Gimpu (S Palu), stream Halu (trib. of Lariang R.), 01°40.2S-120°02.5E, 400 m, 5.V.05, F. Cassola, 18 ♂♂ 7 ♀♀ (FCC); D. Brzoska, 30 ♂♂ 18 ♀♀ (DBC). NW side of Lake Poso, km 10.4 W Tonusu on Bada rd, 01°47.9S-120°29.5E, 1125 m, 12.IV.06, F. Cassola, 1 ♂ (FCC). N side of Lake Poso, Tonusu, 470 m, 01°47.9S-120°31.8E, 1.V.05, F. Cassola, 1 ♀ (FCC). W side of Lake Poso, Siuri Resort, 01°48.2S-120°31.7E, 500 m, 12.IV.06, D. Brzoska, 1 ♂ (DBC).

SULAWESI BARAT: 12 km N Mamasa on Mamasa-Toraja rd, 02°55.1S-119°26.3E, 1325m, 17.III.07, D. Brzoska, 2 ♀♀ (DBC). Mambu-Tapua (NE Polewali), Tolo R., 03°15.3S-119°15.4E, 350m, 19.III.07, D. Brzoska, 10 ♂♂ 11 ♀♀ (DBC). 23.9 km N Polewali on Mamasa rd, 03°18.9S-119°22.3E, 875 m, 28.IV.05, F. Cassola, 1 ♂ (FCC). Polewali, slow stream, 03°22.0S-119°17.4E, 19.III.07, F. Cassola, 1

♀ (FCC). Mambu-Tapua (NE Polewali), Tolo R., 03°15.3S-119°15.4E, 350 m, 19.III.07, F. Cassola, 3 ♂♂ 1 ♀ (FCC). Lemogamba (NE Polewali), Salindu R., 03°21.4S-119°17.3E, 32m, 19.III.07, D. Brzoska, 3 ♂♂ 1 ♀ (DBC).

SULAWESI SELATAN: 29.4 km N Wotu, 02°22.8S-120°47.6E, 500 m, 30.IV.05, F. Cassola, 3 ♀♀ (FCC); D. Brzoska, 3 ♂♂ 3 ♀♀ (DBC). 18.1 km S of Malili-Soroako rd jct, 02°45.8S-121°04.0E, sea level, 24.III.07, F. Cassola, 1 ♀ (FCC). Torajaland, Rantepao-Palopo, 02°56.8S-120°01.7E, 555 m, 24.IV.05, F. Cassola, 4 ♂♂ 3 ♀♀ (DBC). Bakarü Dam rd (E Polewali), km 23.5, 03°29.6S-119°32.3E, 45m, 20.III.07, D. Brzoska, 1 ♀ (DBC). Kampi Baru Batu Malando (E Polewali), Salumabong R., 03°32.2S-119°33.7E, 52m, 15.III.07, D. Brzoska, 1 ♀ (DBC). 4 km SW Enrekang, Sadang R., 03°35.0S-119°45.8E, 60 m, 23.IV.05, D. Brzoska, 12 ♂♂ 8 ♀♀ (DBC). Maroso (S Malili), Lanteani R., 03°39.6S-121°02.7E, 24 m, 25.III.07, F. Cassola, 3 ♂♂ 2 ♀♀ (FCC). 1 km N Siwa on Palopo rd, 03°41.9S-130°24.6E, 27 m, 29.IV.05, F. Cassola, 1 ♀ (FCC); D. Brzoska, 4 ♂♂ 2 ♀♀ (DBC). 20 km N Rappang on Enrekang rd, 03°42.9S-119°48.2E, 145 m, 23.IV.05, F. Cassola, 3 ♂♂ (FCC); D. Brzoska, 3 ♂♂ 2 ♀♀ (DBC). Watu (E Tanete), Gellenge R., 04°30.3S-119°44.0E, 125 m, 22.IV.05, D. Brzoska, 12 ♂♂ 7 ♀♀ (DBC). Jupang nr Soppeng, Pising R., 04°31.5S-119°52.1E, 200 m, 22.IV.05, F. Cassola, 4 ♂♂ 1 ♀ (FCC). Ralla, 04°32.4S-119°41.4E, 52m, 14.III.07, D. Brzoska, 1 ♂ 1 ♀ (DBC). 20 km E Maros, 05°03.2S-119°43.4E, 165 m, 21.IV.05, F. Cassola, 2 ♂♂ (FCC); D. Brzoska, 3 ♂♂ 2 ♀♀ (DBC). Bonto Jai Desa, Bori Sallo Kelamatan Parang Loe, Kabudaten Gowa, Rakiakang R., 05°15.1S-119°40.8E, 140 m, 18.IV.05, F. Cassola, 1 ♂ 1 ♀ (FCC); D. Brzoska, 7 ♂♂ 5 ♀♀ (DBC). Malalang (50 km E Makassar), Janabarang R., 05°16.2S-119°43.8E, 220 m, 18.IV.05, F. Cassola, 4 ♂♂ 2 ♀♀ (FCC). Gunung Lompobatang, Loka R., 05°29.8S-119°55.4E, 20.IV.05, F. Cassola, 2 ♂♂ 2 ♀♀ (FCC).

SULAWESI TENGGARA: 18.5 km S Soroako on Kolaka rd, 02°45.8S-121°04.0E, 2m, 24.III.07, D. Brzoska, 2 ♂♂ (DBC). 5 km SE Asera (N Kendari), 03°34.0S-122°08.1E, 42m, 29.III.07, D. Brzoska, 4 ♂♂ 3 ♀♀ (DBC). Asolo (E Kolaka), 03°38.9S-121°42.4E, 120m, 27.III.07, F. Cassola, 3 ♂♂ 2 ♀♀ (FCC). N Wawolobi, vinc. Asolu, 03°38.9S-121°52.4E, 120m, 27.III.07, D. Brzoska, 2 ♂♂ 8 ♀♀ (DBC). Maroso-Anging R., 03°39.6S-121°02.7E, 24m, 25.III.07, D. Brzoska, 8 ♀♀ (DBC). Ulunggolaka (N Kolaka), Likuha R., 03°58.9S-121°34.1E, 50m, 26.III.07, F. Cassola, 1 ♂ (FCC). Sawa (N Kendari), 03°46.1S-122°26.7E, 3m, 28.III.07, D. Brzoska, 5 ♂♂ 3 ♀♀ (DBC). 3.2 km W Raterate on Kendari rd, 04°01.9S-121°52.9E, 212m, 27.III.07, D. Brzoska, 1 ♂ 1 ♀ (DBC). 7.5 km E Kolaka on Kendari rd, 04°03.6S-121°42.0E, 80m, 26.III.07, F. Cassola, 1 ♂ (FCC); D. Brzoska, 5 ♂♂ 5 ♀♀ (DBC). Amowito, Siama (nr Kendari airport), 04°06.0S-122°22.8E, 155 m, 31.III.07, F. Cassola, 1 ♀ (FCC). *Ibid.*, 1.IV.07, D. Brzoska, 2 ♂♂ 1 ♀ (DBC). Moramo (S Kendari), 04°08S-111°40E, 20 m, 31.III.07, F. Cassola, 2 ♀♀ (FCC). Sumber Sari (S Kendari), Moramo Waterfalls, 04°13.6S-122°44.1E, 85m, 31.III.07, D. Brzoska, 1 ♂ 3 ♀♀ (DBC). *Ibid.*, 9.IV.07, D. Brzoska, 1 ♂ 1 ♀ (DBC). 2 km E Lakara, 04°27.5S-122°19.9E, 15m, 6.IV.07, D. Brzoska, 1 ♂ (DBC). Langkowala, 04°35.6S-121°59.5E, 20m, 7.IV.07, D. Brzoska, 13 ♂♂ 5 ♀♀ (DBC). Buton I., 12.3 km N Maligano, 04°42.1S-122°56.2E, 70m, 4.IV.07, D. Brzoska, 7 ♂♂ 5 ♀♀ (DBC). Buton I., Wambona R., 04°51.0S-122°49.9E, 12m, 4.IV.07, D. Brzoska, 5 ♂♂ 7 ♀♀ (DBC). Buton I., 8 km S Bone, 05°04.7S-122°48.1E, 25m, 3.IV.07, D. Brzoska, 2 ♂♂ 7 ♀♀ (DBC). Buton I., N Waondo Wolio, 05°08.4S-122°53.4E, 440m, 3.IV.07, D. Brzoska, 3 ♂♂ 1 ♀ (DBC).

Specimens collected: 481.

C. decemguttata was first described from Java (where its occurrence, however, is still in question: CASSOLA 1991) and it is also known from other Sundaic and Moluccan islands. However, the whole group seems to deserve a deep revision, as it could well turn out to include several sibling undescribed species. A close relative but separate species, inhabiting a much different habitat, was in fact discovered during our first trip and is described below. *C. decemguttata* was commonly found in most riverbeds and nearby sandy areas, but also in most open areas. Together with *Th. labiatus* and *Cylindera (Ifasina) discreta* (Schaum, 1863) it was the most commonly encountered tiger beetle species. New to Gorontalo and Sulawesi Barat.

16. *Calomera m a m a s a* n. sp. (fig. 22 a-d)

D i a g n o s i s . A large *Calomera* species, superficially similar to *C. decemguttata*, but distinguished from it by the larger body size, the slightly longer pronotum, the shorter labrum, the larger elytral spots, the glabrous (instead of hairy) genae, and the much different habitat (open subvertical clay roadcuts instead of riverbanks and sandy areas).

D e s c r i p t i o n . Head fully glabrous, except for two sensorial setae or setigerous punctures at fixed loci on both sides near eyes; colour dark bronze with green or cupreous reflections on clypeus, genae, antennal plates, vertex and orbital rims. Sides of vertex, orbital declivities and genae finely striated longitudinally. Eyes pale yellow, not particularly large. Labrum wider than long, transverse, more produced in front in female; feebly tri-dentate, the middle tooth more evident and more produced in front, six-haired, testaceous with narrowly blackened front edge. Mandibles strong, testaceous in the outer basal half, black with some green reflections on apical and inner teeth. Palpi discolourous, the maxillary palpi being metallic black with green-violet reflections, the labial palpi testaceous with the last joint metallic dark. Antennae slender, longer in male (up to the half of the elytral length), slightly shorter in female; scape and article 2 greenish-black, a single seta on tip of scape; articles 3-4 more or less annulated with cupreous colour in distal half, with just a few scattered white spiniform hairs; antennomeres 5-11 dull black, very finely and evenly pubescent.

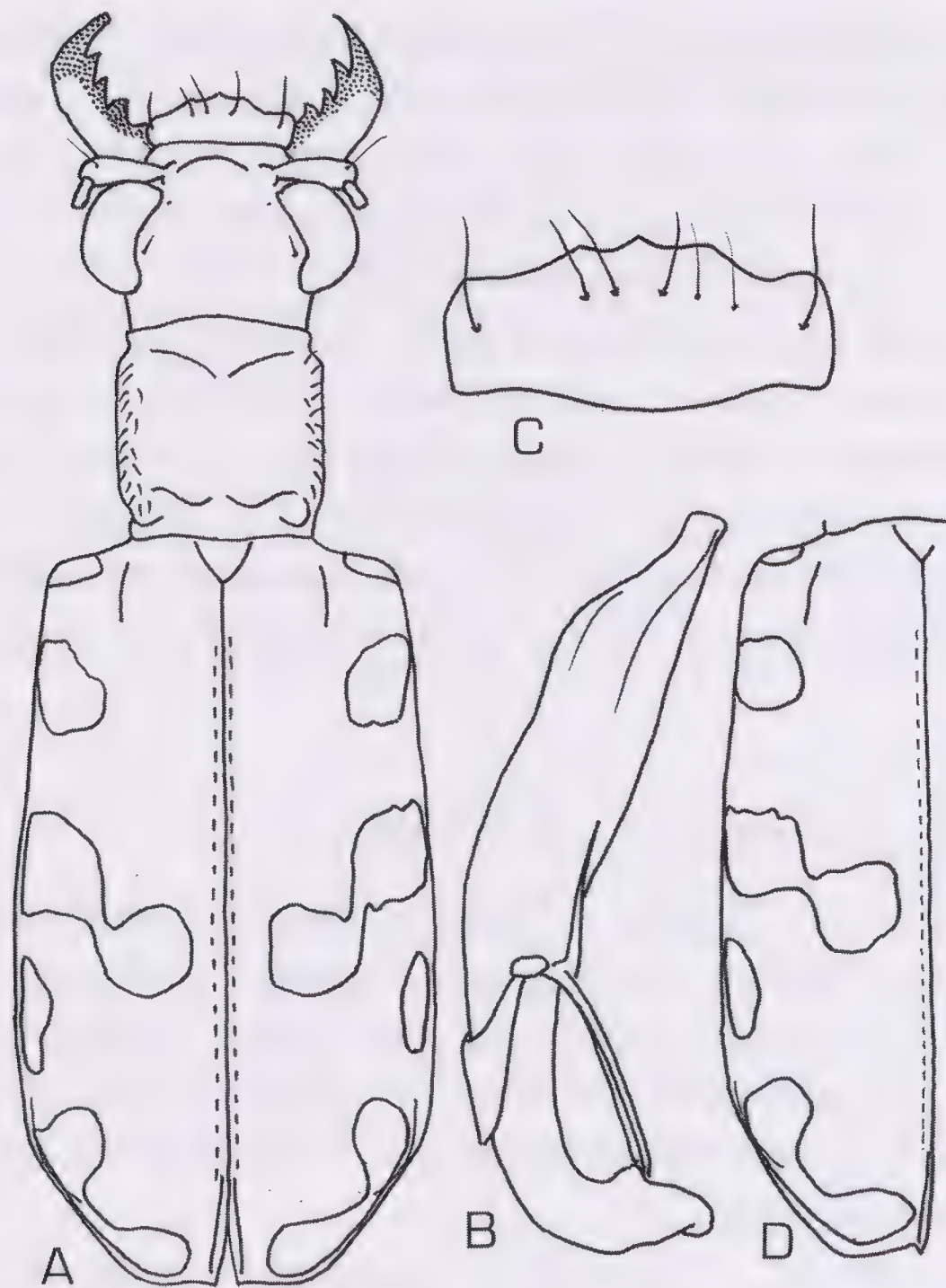


Fig. 22 - *Calomera mamasa* n. sp., male paratype, from 11.1 km W Matabo: a. habitus; b. aedeagus; c. labrum; paratype female, from same locality: d. left elytron.

Thorax: pronotum subsquare, approximately as wide as long, subparallel-sided, similarly coloured as the head, with some cupreous reflections on front border and hind tubercles, the transversal grooves with slight green reflections in some specimens; glabrous with a row of white decumbent hairs on the lateral sides only. Proepisterna cupreous-bronze with some greenish reflections, smooth and bare above, with long white hairs ventrally; white decumbent hairs on mesepimera, the ventral side of mesepisterna, sides of sternum, metepisterna, and coxae. Female coupling sulcus a conspicuous deep pit in the middle of mesepisterum.

Elytra rather large and elongate, wider than head with eyes at shoulders, a bit rounded at sides, enlarged behind, the maxi-

mum width after the middle, moderately convex on disc. Colour dull black, with a velvety appearance, practically impunctate; some cupreous-green reflections on the base between the scutellum and the humeral dot. Suture not raised, very narrowly cupreous; female elytral mirror poorly visible, just a small shagreened area between the subhumeral spot and the suture (but closer to the suture). Elytral markings yellowish, large, evident, roundish, consisting of: a humeral dot, a large unconnected subhumeral spot, a large transversal middle spot from the lateral border to the elytral middle, narrowly connected by a lineole with a large round discal spot behind of it, a smaller postero-lateral spot near the elytral border, and a complete apical lunule ending with a larger subapical squared spot, which protrudes on disc. Hind margins evenly rounded, very finely serrulate, with a very small sutural tooth in both sexes. Epipleura narrow, metallic bronze.

Abdominal sternites metallic bronze with strong bluish-green reflections and a short white recumbent pubescence on the lateral sides; one longer sensorial seta near the middle on both sides of 4th and 5th sternites. Trochanters piceous-black; femora dark bronze with darker "knees" below, partially cupreous-green above; tibiae dark metallic with cupreous and bluish-green reflections basally; tarsi violet-black.

Male aedeagus markedly "knobbed" dorsally because of the inner sac partially protruding outwards from the large distal opening, with two conspicuous lateral crests before the apex and a small dorsal hook apically.

Length: 13.5-15.5 mm (without labrum).

Holotype, ♂, and 8 paratypes (5 ♂♂ 3 ♀♀) from SULAWESI BARAT: 13 km N Mamasa on Toraja road, 02°55.5S-119°27.1E, 1425 m, 27.IV.05, F. Cassola, 1 ♂ 1 ♀, D. Brzoska, 5 ♂♂ 2 ♀♀. Additional 33 paratypes from the same province: 11.5 km N Mamasa on Toraja road, 02°55.0S-119°26.1E, 1280 m, 17.III.07, D. Brzoska, 1 ♀; 11.1 km W Malabo on Mamasa-Mamuju road, 02°59.8S-119°15.2E, 1100 m ca, 18.III.07, F. Cassola, 1 ♂ 3 ♀♀; 44.5 km N Polewali on Mamasa road, 03°12.4S-119°19.2E, 895 m, 26.IV.05, F. Cassola, 2 ♂♂ 3 ♀♀, D. Brzoska, 5 ♂♂ 2 ♀♀; 37 km N Polewali on Mamasa road, 03°15.4S-119°20.4E, 870 m, 26.IV.05, F. Cassola, 1 ♂ 2 ♀♀, D. Brzoska, 1 ♂ 4 ♀♀; 37 km N Polewali on Mamasa road, 03°15.4S-119°20.4E, 870 m, 16.III.07, D. Brzoska, 1 ♂; *Ibid.*,

18.III.07, D. Brzoska, 2 ♂♂; 31.4 km N Polewali on Mamasa road, 03°17.2S-119°22.0E, 995 m, 26.IV.05, D. Brzoska, 1 ♂ 2 ♀♀; *Ibid.*, 16.III.07, D. Brzoska, 1 ♀; *ibid.*, 18.III.07, D. Brzoska, 2 ♂♂; 23 km N Polewali on Mamasa road, 03°18.9S-119°22.3E, 877 m, 28.IV.05, F. Cassola, 1 ♂. Holotype deposited in the Museo Civico di Storia Naturale “G. Doria”, Genova, Italy (MSNG); paratypes in authors’ collections (FCC, DBC). Specimens collected: 42.

E t y m o l o g y . This interesting new *Calomera* species, obviously a close relative of *decemguttata*, is so named because it was discovered around Mamasa in West Sulawesi (Sulawesi Barat).

R e m a r k s . *C. mamasa* n. sp. is clearly a close relative of *C. decemguttata*, with which it can be easily mistaken. However, it can be distinguished from it by several morphological characters such as the larger body size, the slightly longer pronotum, the shorter labrum, the larger elytral spots, and the glabrous genae. It has been found to inhabit - often not far from nearby *decemguttata* populations - much different habitats, *i.e.* open, sunny, vertical to subvertical clay roadcuts or loess quarries. It has not been collected on rivers.

17. *Thopeutica (Thopeutica) diana* (Thomson, 1859) (figs 13-14)

SULAWESI BARAT: Mambu-Tapua (NE Polewali), Tolo R., 03°15.3S-119°15.4E, 350 m, 19.III.07, F. Cassola, 8 ♂♂ 3 ♀♀ (FCC); D. Brzoska, 10 ♂♂ 3 ♀♀ (DBC). 37 km N Polewali on Mamasa rd, 03°15.4S-119°20.4E, 870 m, 16.III.07, F. Cassola, 2 ♂♂ 1 ♀ (FCC); D. Brzoska, 5 ♂♂ 3 ♀♀ (DBC). *Ibid.*, 18.III.07, F. Cassola, 2 ♂♂ 1 ♀ (FCC); D. Brzoska, 6 ♂♂ 4 ♀♀ (DBC). 31.4 km N Polewali on Mamasa rd, nr Masawa, 03°17.2S-119°22.0E, 995 m, 26.IV.05, F. Cassola, 5 ♂♂ 4 ♀♀ (FCC); D. Brzoska, 4 ♂♂ 8 ♀♀ (DBC). *Ibid.*, 15.III.07, F. Cassola, 2 ♂♂ (FCC). *Ibid.*, 16.III.07, D. Brzoska, 2 ♂♂ (DBC). 23.9 km N Polewali on Mamasa rd, 03°18.9S-119°22.3E, 877 m, 26.IV.05, D. Brzoska, 2 ♂♂ (DBC). *Ibid.*, 16.III.07, F. Cassola, 2 ♂♂ 1 ♀ (FCC); D. Brzoska, 3 ♂♂ 1 ♀ (DBC). *Ibid.*, 18.III.07, D. Brzoska, 3 ♂♂ (DBC). *Ibid.*, 20.III.07, F. Cassola, 1 ♂ (FCC). Lemogamba (NE Polewali), Salindu R., 03°21.4S-119°17.3E, 32 m, 19.III.07, D. Brzoska, 7 ♂♂ 2 ♀♀ (DBC). Polewali, slow stream, 03°22.0S-119°17.4E, 19.III.07, F. Cassola, 2 ♂♂ 1 ♀ (FCC).

SULAWESI SELATAN: 20 km W Soroako, 02°35.2S-121°18.6E, 500 m, 23.III.07, F. Cassola, 5 ♂♂ 5 ♀♀ (FCC). Torajaland, 9.5 km N Rantepao, 02°55.8S-119°51.1E, 1140 m, 21.III.07, D. Brzoska, 1 ♂ 1 ♀ (DBC). *Ibid.*, 22.III.07, D. Brzoska, 1 ♂ (DBC). Torajaland, 8 km N Rantepao, 02°56.3S-119°51.4E, 1120 m, 21.III.07, F. Cassola, 1 ♂ (FCC). Bakarü Dam rd (E Polewali), km 2, 03°26.9S-119°35.3E, 650 m, 20.III.07, F. Cassola, 5 ♂♂ (FCC); D. Brzoska, 33 ♂♂ 8 ♀♀ (DBC). Bakarü Dam rd (E Polewali), km 23.5, 03°29.6S-139°32.2E, 45 m, 20.III.07, F.

Cassola, 2 ♂♂ (FCC); D. Brzoska, 6 ♂♂ 2 ♀♀ (DBC). Cinda (NW Bantaeng), 03°29.8S-119°55.5E, 500 m, 13.III.07, D. Brzoska, 10 ♂♂ 11 ♀♀ (DBC). Kampi Baru Batu Malando (E Polewali), Salumabang R., 03°32.2S-119°33.7E, 52 m, 15.III.07, F. Cassola, 15 ♂♂ 10 ♀♀ (FCC); D. Brzoska, 42 ♂♂ 31 ♀♀ (DBC). Malalang (50 km NE Makassar), Janabarang R., 05°16.2S-119°43.8E, 230 m, 11.III.07, D. Brzoska, 1 ♂ (DBC). Bantaeng-Mt. Lompobattang, Sinoa R., 05°29.8S-115°55.4E, 500 m, 13.III.07, F. Cassola, 5 ♂♂ 1 ♀♀ (FCC).

SULAWESI TENGGARA: Sila (NW Kolaka), Sila R., 03°42.7S-121°05.0E, 28 m, 25.III.07, F. Cassola, 1 ♂ (FCC). Ulunggolaka (N Kolaka), Likuha R., 03°58.9S-121°34.1E, 50m, 26.III.07, F. Cassola, 1 ♂ (FCC). 10.3 km E Kolaka on Kendari rd, River Palabo, 04°02.7S-121°42.6E, 180 m, 26.III.07, F. Cassola, 2 ♀♀ (FCC). 15.3 km E Kolaka on Kendari rd, 04°02.5S-121°43.9E, 260 m, 26.III.07, F. Cassola, 1 ♀ (FCC). 11 km SE of Asera (N Kendari), 03°34.7S-122°09.2E, 210 m, 29.III.07, F. Cassola, 1 ♂ (FCC). *Ibid.*, 30.III.07, F. Cassola, 1 ♂ (FCC). 3.9 km SE of Asera (N Kendari), 03°34.4S-122°08.4E, 70 m, 29.III.07, F. Cassola, 1 ♂ (FCC). 3.3 km SE of Asera (N Kendari), 03°34.0S-122°08.1E, 45 m, 29.III.07, F. Cassola, 1 ♀ (FCC). Amowito, Siana (nr Kendari airport), 04°06.0S-122°22.8E, 155 m, 31.III.07, F. Cassola, 1 ♂ 1 ♀ (FCC). Sumber Sari (S Kendari), Moramo Waterfalls, 04°13.6S-122°44.1E, 85 m, 31.III.07, F. Cassola, 11 ♂♂ 1 ♀ (FCC).

Specimens collected: 317.

This species, the type species of the genus *Thopectica* because of the original designation by Chaudoir in SCHAUUM 1861 (sub *eximia diana*) (CASSOLA 1991), was found in a variety of localities and habitats, but apparently it is lacking in central and northern Sulawesi and it is replaced by *Th. bugis* in the south-eastern peninsula. Unfortunately, the type locality ("Celebes") is too vague and is of no help in figuring out this difficult group. Specimens appear to be rather variable in size and apparently the ones from southern Sulawesi Selatan are the smallest ones (10.5-12 mm). The interocular space is not wide and the vertex is more excavated than in the following species. Most specimens have the head and pronotum more or less shiny red, with some green reflections. However some others, namely those from the Torajaland, Malalang and Cinda near Bantaeng have the same body parts metallic black to dark violaceous, thus giving the impression of a different species. However, no specific distinctions were noticed.

In one instance, at 31.4 km N of Polewali, *Th. diana* specimens (all of which have the head and pronotum bright shiny cupreous-red with some bluish-violet reflections) were quite unexpectedly found in a much different habitat than the others, namely on a subvertical clay roadcut, partially moist and shaded, outside the forest habitat and far from running water. All other specimens were collected in

the “normal” habitat, *i.e.* on stones and leaves along streams and streamlets in forest (figs 12-13). New to Sulawesi Barat.

18. *Thopectica (Thopectica) sawadai* Cassola, 1991

SULAWESI TENGAH: S of Palu, 12 km N Kulawi on Gimpu rd (S Palu), 01°21.4S-119°58.4E, 400 m, 6.V.05, F. Cassola, 3 ♂♂ 4f (FCC); D. Brzoska, 9 ♂♂ 10 ♀♀ (DBC). *Ibid.*, 15.IV.06, F. Cassola, 14 ♂♂ 14 ♀♀ (FCC). 3 km S Kulawi on Gimpu rd (S Palu), 01°27.2S-119°59.0E, 620 m, 6.V.05, D. Brzoska, 3 ♂♂ (DBC). *Ibid.*, 15.IV.06, F. Cassola, 12 ♂♂ 8 ♀♀ (FCC). 11 km N Gimpu (S Palu), 01°31.8S-120°00.6E, 620 m, 5.V.05, F. Cassola, 1 ♂; D. Brzoska, 2 ♂♂ 1 ♀ (DBC). 6 km N Gimpu (S Palu), 01°33.8S-120°01.4E, 530 m, 5.V.05, F. Cassola, 1 ♀ (FCC); D. Brzoska, 3 ♂♂ 1 ♀ (DBC). 5 km N Gimpu (S Palu), 01°34.0S-120°01.4E, 520 m, 5.V.05, F. Cassola, 2 ♂♂ 2 ♀♀ (FCC); D. Brzoska, 3 ♂♂ 3 ♀♀ (DBC). 6 km S Gimpu (S Palu), 01°39.9S-120°02.7E, 400 m, 5.V.05, D. Brzoska, 1 ♂ (DBC).

Specimens collected: 96.

Described from several localities of Central Sulawesi (CASSOLA 1991), this conspicuous species was also recorded from Palopo in Sulawesi Selatan (CASSOLA 1996). It is obviously a close relative of *diana*, but it is larger and more strongly built and the middle spots of the elytra are situated more or less on the same transversal line. The elytral apex is more or less widely rufescent (with a poorly defined yellowish apical spot sometimes appearing through), duller and darker than the yellowish elytral spots. Moreover, this species remarkably includes two colour morphos, one with head and pronotum shining cupreous-red and the other with the same body parts dark violaceous to black (the black form being apparently more commonly encountered). These colour “phases” do not appear to represent secondary sexual characters as they can be found both in males and females.

At 12 km N of Kulawi *sawadai* was found in 2005 while syntopically occurring with the very similar *Wallacedela nishiyamai* (Cassola, 1991), which, however, is smaller and belongs to a fully different genus, as the shape of male aedeagus and the more marked female mesepisternal coupling sulcus easily indicate (see below). It is strange that in 2006, in the very same site, *nishiyamai* was not found and that there was just *sawadai* abundantly occurring in the spot (possibly because of a difference of seasonality). One *sawadai* female specimen from 11 km N of Gimpu is remarkable by having a theratological fore left leg, with the femur and the tibia fused all-

together into a single, apparently non-functional and apically much thickened stump.

19. *Thopectica (Thopectica) bugis* Cassola, 1991 (fig. 15)

SULAWESI SELATAN: 20 km W Soroako, 02°35.2S-121°18.6E, 500 m, 23.III.07, F. Cassola, 5 ♂♂ 5 ♀♀ (FCC); D. Brzoska, 12 ♂♂ 3 ♀♀ (DBC).

SULAWESI TENGGARA: 3.3 km SE Asera (N Kendari), 03°34.0S-122°08.1E, 45 m, 29.III.07, F. Cassola, 1 ♀ (FCC); D. Brzoska, 1 ♂ 1 ♀ (DBC). 3.9 km SE Asera (N Kendari), 03°34.4S-122°08.4E, 70 m, 29.III.07, F. Cassola, 1 ♂ (FCC); D. Brzoska, 2 ♂♂ (DBC). 11 km SE Asera (N Kendari), 03°34.7S-122°09.2E, 210 m, 29.III.07, F. Cassola, 1 ♂ (FCC). *Ibid.*, 30.III.07, F. Cassola, 1 ♂ (FCC); D. Brzoska, 1 ♂ (DBC). Sila (NW Kolaka), Sila R., 03°42.7S-121°05.0E, 28 m, 25.III.07, F. Cassola, 1 ♂ (FCC); D. Brzoska, 1 ♂ (DBC). Ulunggolaka (N Kolaka), Likuha R., 03°58.9S-121°34.1E, 50m, 26.III.07, F. Cassola, 1 ♂ (FCC). 15.3 km E Kolaka on Kendari rd, 04°02.5S-121°43.9E, 260 m, 26.III.07, F. Cassola, 1 ♀ (FCC); D. Brzoska, 1 ♀ (DBC). 10.3 km E Kolaka on Kendari rd, Palabo R., 04°02.7S-121°42.6E, 180 m, 26.III.07, F. Cassola, 2 ♀♀ (FCC); D. Brzoska, 2 ♂♂ 4 ♀♀ (DBC). Huduriah R. (nr Kendari Airport), 04°05.7S-122°21.4E, 135 m, 1.IV.07, D. Brzoska, 9 ♂♂ 1 ♀ (DBC). *Ibid.*, 8.IV.07, D. Brzoska, 8 ♂♂ (DBC). Amowito, Siama (nr Kendari airport), 04°06.0S-122°22.8E, 155 m, 31.III.07, F. Cassola, 1m 1 ♀ (FCC). *Ibid.*, 1.IV.07, D. Brzoska, 2 ♂♂ (DBC). Sumber Sari (S Kendari), Moramo Waterfalls, 04°13.6S-122°44.1E, 85 m, 31.III.07, F. Cassola, 11 ♂♂ 1 ♀ (FCC); D. Brzoska, 10 ♂♂ 4 ♀♀ (DBC). *Ibid.*, 9.IV.07, D. Brzoska, 10 ♂♂ 5 ♀♀ (DBC).

Specimens collected: 110.

This species seems to replace *diana* in the south-eastern peninsula. It is recognizable by the slightly larger body size (12.5-13.5 mm) and by having the lateral sides of the otherwise dull black elytra more or less rufescent (especially between the humeral and sub-humeral spots). Moreover, the interocular space is wide, not much excavated, and the vertex is sometimes slightly raised in the middle. Many specimens are remarkable by lacking any apical yellow spot and having the apical part of the elytra just more or less rufescent. In several cases the extensive rufescent colouration encompasses all the elytral spots; and in one case (male specimen from Ulunggolaka) it even fully covers the whole side half of the elytra. Although most type specimens, allegedly coming from Puncak near Palopo, have the middle spots forming a complete middle band, the rufescent colouration of most of our specimens connects the humeral spots with each other, is very narrow laterally, and then is visible around the subapical spot and on the elytral apex. However, most specimens from the Moramo Waterfalls and many of those from the

environs of the Kendari airport (fig. 14) have instead the rufescent colouration poorly developed, hardly connecting the humeral spots and almost lacking laterally.

20. *Thopectica (Thopectica) eustalacta* (Schaum, 1861)

SULAWESI UTARA: Dumoga-Bone NP, London R. (trib. of Tumpah R.), 00°34.6N-123°54.0E, 230 m, 4.IV.06, D. Brzoska, 1 ♂ (DBC).

Specimens collected: 1.

This species, together with the two following species, is characterized by a marked chromatic dimorphism of sexes, the males being mostly black with roseate or cupric reflections, the females being bluish-violet in colour, with smaller elytral spots (the two middle ones usually tending to coalesce into a transverse bilobed middle band). Males obviously differ by the shape of the aedeagus apex, while females are sometimes more puzzling and difficult to be identified with certainty. This species seems not to be abundant as we collected only one specimen, which seems to confirm that *eustalacta* is restricted to North Sulawesi.

21. *Thopectica (Thopectica) vantoli* Cassola, 1991

SULAWESI BARAT: 23.9 km N Polewali on Mamasa rd, 03°18.9S-119°22.3E, 875 m, 26.IV.05, D. Brzoska, 1 ♂ (DBC). *Ibid.*, 16.III.07, D. Brzoska, 2 ♂♂ (DBC). *Ibid.*, 18.III.07, D. Brzoska, 1 ♂ 1 ♀ (DBC). *Ibid.*, 20.III.07, D. Brzoska, 3 ♂♂ (DBC).

SULAWESI SELATAN: 21 km W Palopo, Paredean R., 02°57.0S-120°05.6E, 575 m, 22.III.07, D. Brzoska, 1 ♀ (DBC).

Specimens collected: 9.

This species of the *eustalacta*-group was described from the Lore Lindu National Park and the Palu area in Central Sulawesi (CASSOLA 1991), and males are mostly black with a large yellowish transverse middle band (often more or less coalescent with the sub-apical spot). Females, in contrast, are blue-violet in colour and easily confused with those of the following species. *Th. vantoli* was already recorded from Sulawesi Selatan by CASSOLA (1996) and MATALIN (1998), but it is new for Sulawesi Barat.

22. *Thopectica (Thopectica) toraja* Cassola, 1991

SULAWESI TENGAH: NW side of Lake Poso, 6.9 km W Tonusu on Bada rd, 01°47.3S-120°30.1E, 1200 m, 1.V.05, F. Cassola, 1 ♀ (FCC). NW side of Lake Poso, 10.4 km W Tonusu on Bada rd, 01°47.8S-120°29.6E, 1125 m, 12.IV.06, F. Cassola, 2 ♂♂ 2 ♀♀ (FCC); D. Brzoska, 2 ♂♂ 1 ♀ (DBC).

SULAWESI SELATAN: Torajaland, 19.5 km E Rantepao on Palopo rd, 02°56.3S-120°01.8E, 565 m, 24.IV.05, D. Brzoska, 1 ♂ (DBC). *Ibid.*, 25.IV.05, D. Brzoska, 1 ♀ (DBC).

Specimens collected: 10.

Despite the fact that this species was described based on a very large series of paratypes from the Palopo area, during our trips we managed to find in three localities only. This may be another case of a species that is primarily nocturnal, or one that is strongly attracted to lights. While obviously differing from the two preceding species by the shape of male aedeagus, which exhibits an apex markedly curved dorsally, *Th. toraja* shares with them the character of having markedly chromatically dimorphic sexes. A female specimen was surprisingly caught in 2005 when, while trying to escape the first author, it flew straight into a spider web. The spider - a female *Neoscona* cf. *theisi* (Walckenaer, 1842), Araneidae - quickly came and began to envelop the tiger beetle in its web. New to Sulawesi Tengah.

23. *Thopectica (Thopectica) pseudoschaumi* n. sp. (fig. 23 a-d)

D i a g n o s i s . Similar to but smaller than *Wallacedela schaumii*, however a *Thopectica (Thopectica)* species, having smaller, shorter, subparallel-sided pronotum; labrum, antennae and legs black with some roseate reflections here and there; palpi testaceous with the last segment metallic dark; female coupling sulcus consisting in a marked deep pit, placed about the middle of mesepisternum below the epipleural line. Male aedeagus slightly bent ventrally at apex, with a convoluted flagellum in the inner sac which is visible through the thick wall of the penis.

D e s c r i p t i o n . Head violet black, with some green reflections on vertex, antennal plates, the orbital declivities, behind on neck, on genae and on sides of clypeus; glabrous, just two sensorial setae or setigerous punctures on fixed loci near both eyes. Surface

smooth, declivities of eyes and vertex with fine longitudinal striae, these becoming waved and oblique behind the eyes; striae of genae longitudinal, less numerous, stronger. Labrum short, transverse, metallic violet black, sometimes briefly testaceous at sides, longitudinally and briefly carinated, with a very small tooth in the middle, more distinctly but feebly tridentate in male, with 10-12 hairs near forward edge and 2-4 additional ones in the middle of disc and near base. Mandibles testaceous basally, then pitchy black, slightly rufescent on teeth. Mouth parts testaceous, with the last joints of palpi more or less metallic dark. Antennae long, nearly reaching the basal third of the elytral length in male, slightly shorter in female; scape and 2nd article of antennae metallic greenish black, one single erect seta on tip of scape; articles 3-4 almost bare, with stronger violet reflections, antennomeres 5-11 dull blackish, finely and evenly pubescent.

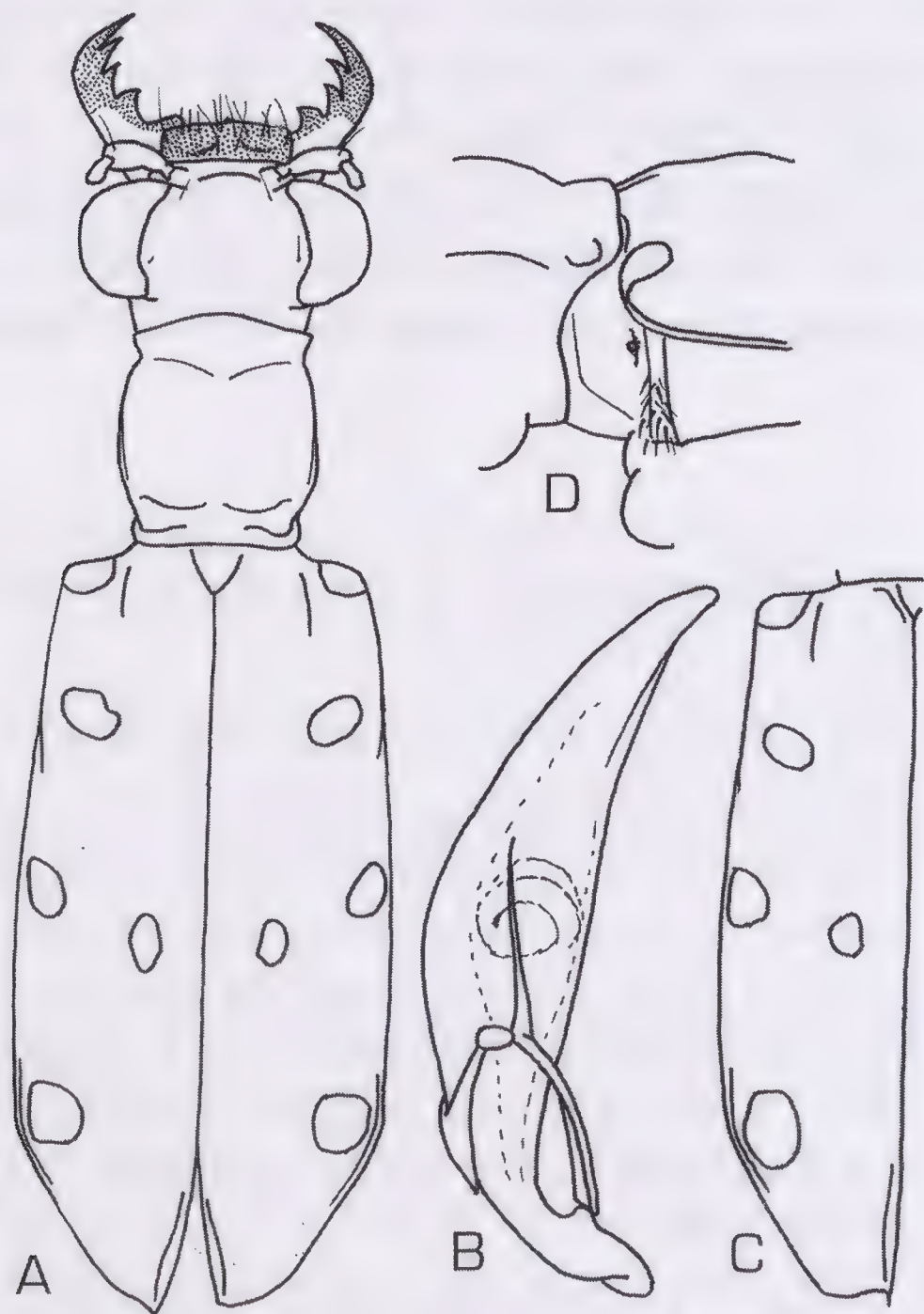


Fig. 23 - *Thopeutica (Thopeutica) pseudoschaumi* n. sp., male holotype: a. habitus; b. aedeagus; female paratype: c. left elytron; d. mesepisternal coupling sulcus.

Thorax: Pronotum shorter than that of *Wallacedela schaumii*, slightly longer than wide, subparallel-sided, smooth, glabrous, violet black with some greenish reflections especially in the middle of front lobe and on front sides of median lobe; hind tubercles small. Epipleural rim effaced, proepisterna violet black, with some white erect hairs near forward and ventral edges. Some white subrecumbent pubescence also on mesepimera, the ventral side of mesepisterna, coxae, the sides of sternum, and on the hind part of metepisterna; female mesepisternal coupling sulcus consisting in a marked deep pit, placed about the middle of mesepisternum below the epipleural line.

Elytra wider than head across eyes, with well-marked, rounded shoulders; sutural angle emarginated in both sexes, with a rather strong sutural spine, briefly metallic green to cupric. Colour wholly dull black; females without any elytral "mirror". Elytral markings comprising the usual five, whitish to yellowish, small, widely separated spots: one humeral spot, slightly more polished than the others, one oval to oblique subhumeral spot, a lateral spot a bit before the middle, a smaller discal spot closer to the suture and slightly behind of it, and a roundish subapical spot. Epipleura more or less metallic violet black.

Underside violet black with some greenish reflections, glabrous except for some short white recumbent pubescence on sides of 2nd to 5th abdominal sternites; trochanters partly rufescent to testaceous, femora, tibiae and tarsi more or less metallic black, with green reflections at ventral base of femora, almost glabrous, with a few rows of curled to spiniform white hairs.

Aedeagus tapered, slightly inflated in the middle, ventrally bent at apex, with no dip dorsally; inner sac typical of the genus *Thopeutica*, with a long convoluted flagellum that, despite the rather thick wall of the penis, is nevertheless visible through it.

Length: 13-14 mm (without labrum).

Holotype, ♂, and three paratypes (2 ♂♂ 1 ♀) from SULAWESI TENGAH: SW of Tolitoli, 24.3 km S of "km 4-Basidondo", 00°37.2N-120°39.8E, 1040 m, 9.IV.06, F. Cassola, 1 ♀; D. Brzoska, 3 ♂♂. Four additional paratypes (2 ♂♂ 2 ♀♀) with same label data but: 8.IV.06, F. Cassola, 1 ♀; D. Brzoska, 2 ♂♂ 1 ♀. Holotype deposited in the Museo Civico di Storia Naturale "G. Doria", Genova, Italy (MSNG); paratypes in authors' collections (FCC, DBC). Specimens collected: 8.

E t y m o l o g y . The name of this new *Thopectica* (*Thopectica*) species underlines its striking similarity to *Wallacedela schauimi* (W. Horn, 1892), with which it was at first mistaken in the field. Subsequent examination in the laboratory of the inner sacs of the male aedeagi made it clear that it is a *Thopectica* species instead.

R e m a r k s . Similar-looking as, but smaller than, *Wallacedela schauimi*, with which it was at first mistaken in the field, this new species obviously differs by the presence of a deep coupling sulcus in females and by the very different male aedeagus, which exhibits a long convoluted flagellum in its inner sac. Three almost identical specimens from the environs of Sedoa, which however differ by the fully pale testaceous labrum, the slightly narrower pronotum and the different shape of male aedeagus, are here below described as a distinct, although closely allied, species. More material will hopefully clarify the relationship of these species.

24. *Thopectica (Thopectica) albolarbiata* n. sp. (fig. 24 a-d)

D i a g n o s i s . Also somewhat reminiscent of *Wallacedela schauimi*, this species is obviously a close relative of the preceding one, however differing from it by the fully pale testaceous labrum, the slightly narrower and more parallel-sided pronotum, as well as by the shorter elytral apex; antennae and legs black, palpi testaceous with the last segment metallic dark. Female coupling sulcus a marked roundish pit about the middle of mesepisternum, close to the mesepimeron, placed lower than in the preceding species. Male aedeagus much different, ventrally hooked apically, with a long convoluted flagellum that, despite the rather thick wall of the penis, is easily visible through it.

D e s c r i p t i o n . Head violet black, with some green reflections on vertex, antennal plates, the orbital declivities, behind on neck, on genae and on sides of clypeus; glabrous, just two sensorial setae or setigerous punctures on fixed loci near both eyes. Surface smooth, declivities of eyes and vertex with very fine longitudinal striae, these becoming stronger, less numerous and oblique behind on neck; striae of genae longitudinal, less numerous, stronger. Labrum short, transverse, fully pale testaceous, slightly more advanced in the middle, very feebly tridentate, with 10-12 hairs

near forward edge and 2 additional ones in the front middle part of disc. Mandibles testaceous basally, then pitchy black, rufescent on teeth. Mouth parts testaceous, except for the last joint of labial palpi more and the last two joints of the maxillary ones which are metallic dark. Antennae longer than in the preceding species, as long as well behind the half of the elytral length in male, slightly shorter in female; scape and 2nd article of antennae metallic black with green reflections, one single erect seta on tip of scape; articles 3-4 almost bare, with stronger violet and green reflections, antennomeres 5-11 dull black, finely and evenly pubescent.

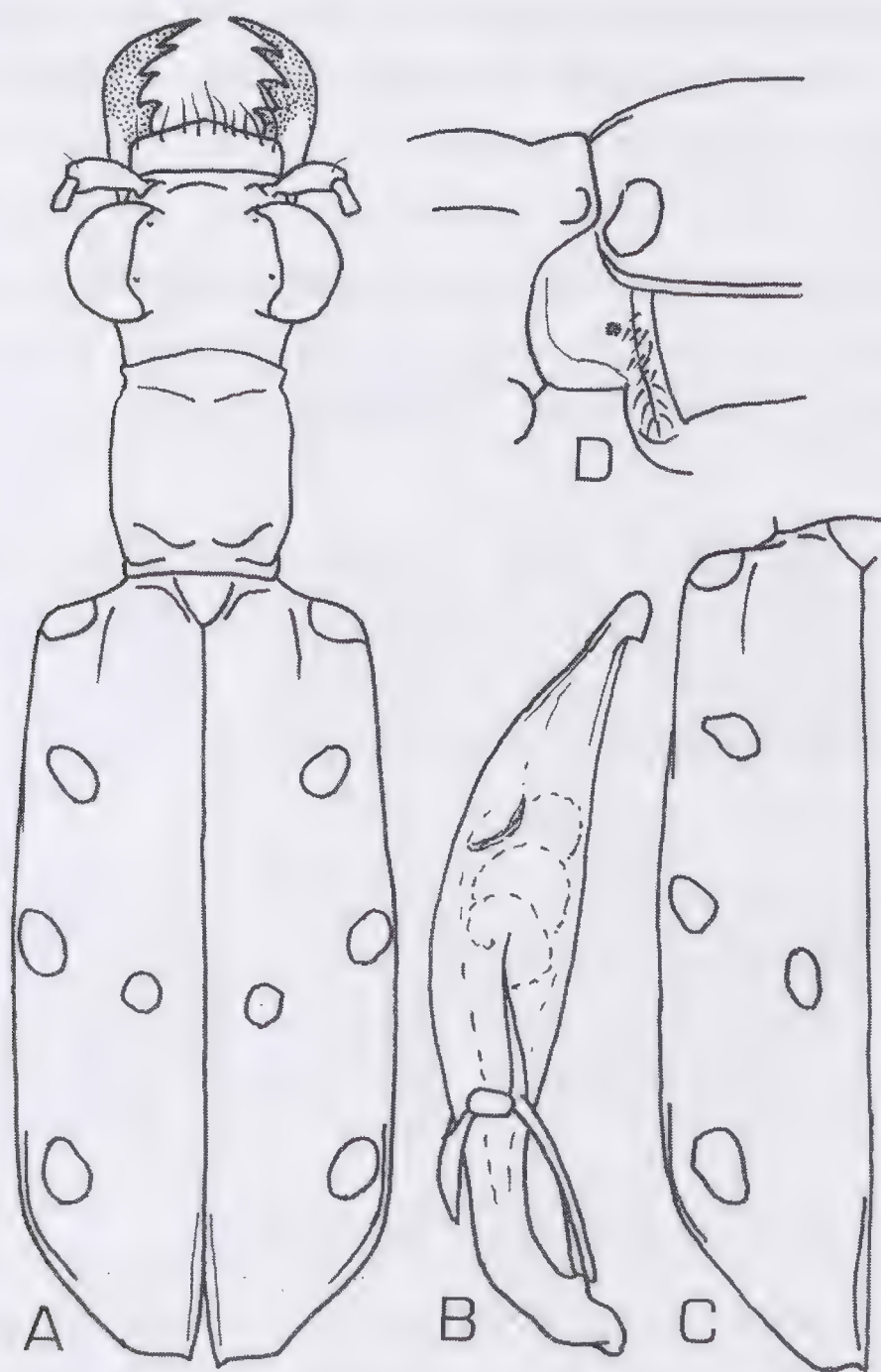


Fig. 24 - *Thopeutica (Thopeutica) albolabiata* n. sp., male holotype: a. habitus; b. aedeagus; female paratype: c. left elytron; d. mesepisternal coupling sulcus.

Thorax: Pronotum short, narrower than in *pseudoschaumi*, longer than wide, subparallel-sided, smooth, glabrous, poorly globose on disc; violet black with green reflections on sides, more

violet on disc; hind tubercles small, greenish. Epipleural rim effaced, proepisterna greenish black, with sparse long white erect hairs on their ventral half. Much white subrecumbent pubescence also on mesepimera, the ventral side of mesepisterna, the coxae, the lateral sides of sternum, and more sparsely on metepisterna; female mesepisternal coupling sulcus a marked roundish pit about the middle of mesepisterna, close to mesepimera.

Elytra wider than head across eyes, with well-marked, rounded shoulders; sutural angle shorter than that of the preceding species, emarginated in both sexes, with a small but strong sutural spine, briefly metallic greenish to black. Colour wholly dull black with a velvety greenish hue; females devoid of any elytral “mirror”. Elytral markings comprising the usual five white small widely separated spots: one humeral spot, more polished than the others, one oval to laterally pointed oblique subhumeral spot, a lateral spot a bit before the middle, a smaller discal spot closer to the suture and slightly behind of it, and a roundish subapical spot. Epipleura metallic greenish black.

Underside violet black with green reflections, glabrous except for some short white recumbent pubescence on sides of the abdominal sternites; trochanters pale testaceous, femora, tibiae and tarsi metallic black (ventral base of femora green), almost glabrous, with a few rows of curled or spiniform white hairs.

Male aedeagus tapered, inflated in the middle and, unlike that of the preceding species, ventrally hooked at apex; inner sac typical of the genus *Thopeutica*, with a long convoluted flagellum that, despite the rather thick wall of the penis, is nevertheless visible through it.

Length: 12.5-13 mm (without labrum).

Holotype, ♂, and 2 paratypes, ♀♀, from SULAWESI TENGAH: Wuasa-Palu road, 10.7 km W of Sedoa, 01°18.3S-120°16.7E, 1410 m, 14.IV.06, F. Cassola, 1 ♀; D. Brzoska, 1 ♂ 1 ♀ (DBC). Holotype deposited in the Museo Civico di Storia Naturale “G. Doria”, Genova, Italy (MSNG); paratypes in authors’ collections (FCC, DBC). Specimens collected: 3.

E t y m o l o g y. The name refers to the remarkable pale testaceous labrum, which by itself suggests specific separation from the above described species, *Th. (Th.) pseudoschaumi*.

R e m a r k s . Similarly as the preceding species, this new *Thopeutica* (*Thopeutica*) species too was at first mistaken in the field with *Wallacedela schaumii*, but careful subsequent examination in the laboratory of the inner sac of the male aedeagus made it obvious that it belongs to the genus *Thopeutica* instead. This species differs from both *Wallacedela schaumii* and *Thopeutica* (*Thopeutica*) *pseudo-schaumii* by the pale testaceous labrum, the slightly smaller size, the shorter, narrower and parallel-sided pronotum, the shorter elytral apex, the presence of a coupling sulcus in female, as well as the apically hooked male aedeagus. Only three specimens were collected in the environs of Sedoa, and of course additional specimens would be needed to clarify the relationships of these species.

25. *Thopeutica* (*Thopeutica*) *naja* n. sp. (fig. 25 a-d)

D i a g n o s i s . A *Thopeutica* (*Thopeutica*) species belonging to the *diana*-group, with a short, bulky aedeagus; colour dark bronze, with some greenish or cupric reflections on head and pronotum, elytra dull black, the submarginal middle spot larger than the discal one and showing some tendency to coalesce with it in some specimens; legs metallic black, except the basal half of femora which are partly testaceous.

D e s c r i p t i o n . Head dark bronze to black, with slight cupric to violet reflections on clypeus, frons, orbital declivities, and behind on neck, and with green reflections on sides of vertex, antennal plates, and on genae; glabrous, two setigerous punctures on fixed loci near both eyes. Clypeus and frons very finely sculptured, some stronger longitudinal striae on genae, the orbital declivities and on vertex, the striae becoming transversal and a bit waved behind on neck. Labrum testaceous, transverse, feebly tridentate in the middle, the central tooth more protruding in front, with 10-12 hairs near forward edge and 1-2 additional ones more on disc in the middle. Mandibles basally testaceous, blackened on distal half and on teeth. Mouth appendages testaceous, the last joint of palpi metallic dark. Antennae approximately reaching the half of the elytral length in male, a bit shorter in female: scape and articles 2-4 of the antennae metallic black, with green or violet reflections on 3rd and 4th articles, nearly bare, a single seta on tip of scape and 1-2 spiniform setae

on 3rd and 4th articles; antennomeres 5-11 brownish dark, sometimes slightly rufescent, finely and evenly covered with a short pubescence.

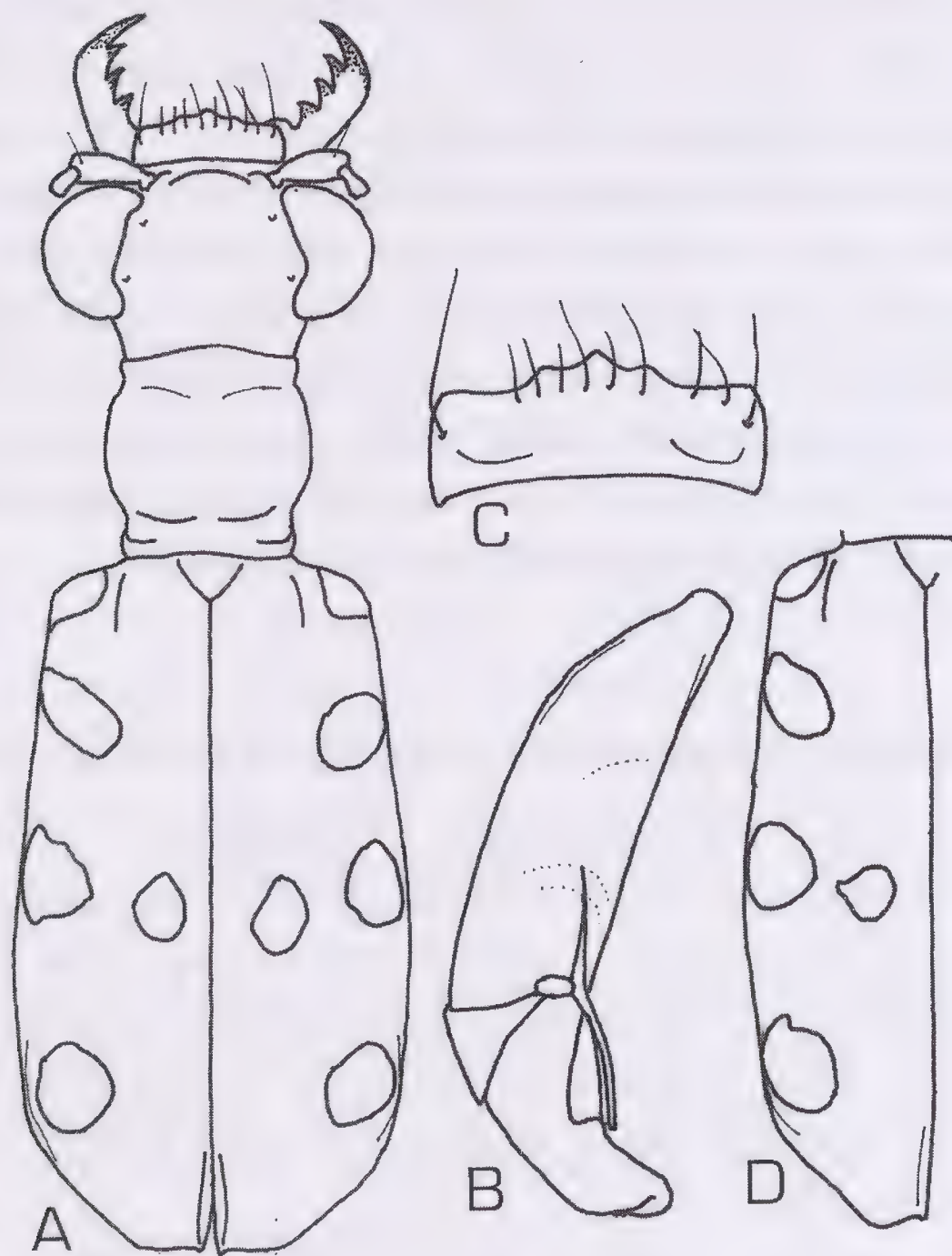


Fig. 25 - *Thopeutica (Thopeutica) naja* n. sp., male paratype: a. habitus; b. aedeagus; c. labrum; female paratype: d. left elytron.

Thorax: pronotum slightly wider than long, rounded at sides, slightly globose on disc, smooth, glabrous, shining metallic black with some cupric to violet hue on disc and some green reflections on transversal grooves; surface slightly and unevenly wrinkled on disc and on fore and hind lobes, posterolateral tubercles small. Episterna smooth and glabrous, just a few white setae near forward edge of proepisterna, on the lower part of mesepimeron, and on hind corner of metepisterna; female coupling sulci not appreciable, lacking; sides of sternum pubescent.

Elytra wider than head across eyes, slightly rounded at sides, with the sutural spine very small in both sexes; dull blackish on

disc, with some brownish hue, narrowly shining metallic on the rear margin and on base near the scutellum; no elytral mirror in female. Elytral yellowish markings comprising a large humeral dot, an oval, slightly oblique, distinct posthumeral spot, a bit larger submarginal spot, usually pointing to the discal smaller spot and sometimes tending to narrowly coalesce with it, and a large roundish subapical spot; no apical spot or lunule present. Epipleura testaceous-rufescent, slightly metallic in front.

Abdominal sternites more or less metallic bluish-green, with a short, white pubescence in the middle, often the first 2-3 sternites bare. Coxae metallic green, the hind ones narrowly but densely covered with hairs at sides; trochanters and basal lower half of femora testaceous, distal half of femora, tibiae and tarsi shining black, basal half of tibiae sometimes weakly rufescent.

Aedeagus short, massive, bulky, similar to that of *Th. (Th.) bugis* Cassola, 1991, with a complex convoluted flagellum.

Length: 10.5-12.5 mm (without labrum).

Holotype, male, and 24 paratypes (14 ♂♂ 10 ♀♀) from SULAWESI SELATAN: 2.8 km E Anabanua, half-dry creek, 03°56.9S-120°05.4E, 80 m, 29.IV.05, F. Cassola, 3 ♂♂ 5 ♀♀; D. Brzoska, 12 ♂♂ 5 ♀♀. Seventy-six additional paratypes from same locality: 15.III.07, F. Cassola, 8 ♂♂ 7 ♀♀ (FCC); D. Brzoska, 39 ♂♂ 22 ♀♀ (DBC). Holotype deposited in the Museo Civico di Storia Naturale "G. Doria", Genova, Italy (MSNG); paratypes in authors' collections (FCC, DBC). Specimens collected: 101.

E t y m o l o g y . This additional new *Thopectica* species is cordially dedicated to our clever and co-operative local guide during our Sulawesi trips, Najamuddin ("Naja") M. Rusdi, from Makassar, Sulawesi Selatan. Naja was very quick to learn to search for tiger beetles and helped us greatly with our collecting.

R e m a r k s . This new species was found in the muddy/gravel bed of narrow, shadowed, slow flowing creeks in the environs of Anabanua (Sulawesi Selatan), south of a large rice processing complex. During our second visit to the site in 2007, we found the habitat to be more extensive than first thought but still rather circumscribed. *Th. (Th.) naja* is especially interesting because, although clearly belonging to the *diana*-group, it has metallic instead of testaceous legs.

26. *Thopeutica (Thopeutica) stenodera* (Schaum, 1861)

SULAWESI UTARA: Tonbohon (N Manado), Danopola R., 01°34.7N-124°56.4E, 50 m, 28.III.06, F. Cassola, 3 ♂♂ 3 ♀♀ (FCC); D. Brzoska, 14 ♂♂ 10 ♀♀ (DBC). N Tondano on Sampiri rd, 01°23.1N-124°56.0E, 285 m, 30.III.06, D. Brzoska, 14 ♂♂ 6 ♀♀ (DBC). Kakas (S Lake Tondano), 01°23.0N-124°56.0E, 30.III.06, F. Cassola, 6 ♂♂ 1 ♀ (FCC). N Tondano on Armaididi rd, 01°19.8N-124°55.5E, 680 m, 30.III.06, F. Cassola, 3 ♂♂ 1 ♀ (FCC); D. Brzoska, 2 ♂♂ 1 ♀ (DBC). Rumoong Atas (W Kawangkoan), Tunaan R., 01°13.6N-124°44.3E, 550 m, 1.IV.06, F. Cassola, 1 ♂ 2 ♀♀ (FCC); D. Brzoska, 24 ♂♂ 8 ♀♀ (DBC). Kiawa II, Ranowanko R., 01°12.7N-124°47.4E, 675 m, 31.III.06, D. Brzoska, 5 ♂♂ 2 ♀♀ (DBC). San Dangan nr Kakas (SW Lake Tondano), 01°09.7N-124°53.3E, 720 m, 30.III.06, D. Brzoska, 1 ♂ (DBC). NE Mapolo, 01°00.0N-124°32.3E, 350 m, 2.IV.06, D. Brzoska, 1 ♂ 1 ♀ (DBC). 4 km N Mapolo, Owasaan R., 00°59.8N-124°31.4E, 285 m, 2.IV.06, F. Cassola, 2 ♂♂ 1 ♀ (FCC); D. Brzoska, 7 ♂♂ 4 ♀♀ (DBC). Dumoga Bone NP, London R. (trib. of Tumpah R.), 00°34.5N-123°54.1E, 230 m, 3-4.IV.06, F. Cassola, 5 ♂♂ 2 ♀♀ (FCC); D. Brzoska, 19 ♂♂ 16 ♀♀ (DBC). 1.5 km N Matayangan on Molibagu rd, 00°28.5N-123°58.3E, 225 m, 4.IV.06, F. Cassola, 1 ♂ (FCC); D. Brzoska, 3 ♂♂ 4 ♀♀ (DBC). 10.2 km N Molibagu, 00°27.1N-123°58.1E, 215 m, 4.IV.06, D. Brzoska, 4 ♂♂ 3 ♀♀ (DBC). 8.9 km N Molibagu, 00°26.6N-123°58.7E, 210 m, 5.IV.06, F. Cassola, 2 ♂♂ 1 ♀ (FCC); D. Brzoska, 2 ♂♂ 3 ♀♀ (DBC). 7.8 km N Molibagu, 00°25.9N-123°58.0E, 200 m, 5.IV.06, D. Brzoska, 1 ♀ (DBC).

GORONTALO: Tutulo (E Gorontalo), 00°30.9N-123°14.4E, 75m, 6.IV.06, D. Brzoska, 1 ♂ 1 ♀ (DBC).

SULAWESI TENGAH: 2.5 km S “km 4-Basidondo” (SW Tolitoli), 00°43.3N-120°37.0E, 100 m, 9.IV.06, F. Cassola, 1 ♂ (FCC); D. Brzoska, 2 ♂♂ (DBC). 5.8 km S “km 4-Basidondo” (SW Tolitoli), 00°42.5N-120°37.5E, 136 m, 9.IV.06, F. Cassola, 5 ♂♂ 2 ♀♀ (FCC); D. Brzoska, 13 ♂♂ 15 ♀♀ (DBC). 12 km N Kulawi on Gimpu rd (S Palu), 01°21.4S-119°58.4E, 400 m, 6.V.05, F. Cassola, 1 ♂ 1 ♀ (FCC); D. Brzoska, 6 ♂♂ 2 ♀♀ (DBC). *Ibid.*, 15.IV.06, F. Cassola, 1 ♂ (FCC). 3 km S Kulawi on Gimpu rd (S Palu), 01°27.2S-119°59.0E, 620 m, 6.V.05, F. Cassola, 4 ♂♂ 2 ♀♀ (FCC); D. Brzoska, 4 ♂♂ 6 ♀♀ (DBC). *Ibid.*, 15.IV.06, F. Cassola, 3 ♂♂ 1 ♀ (FCC). 12.9 km SW Mapane on Watutau rd, 01°31.1S-120°37.8E, 295 m, 3.V.05, D. Brzoska, 1 ♂ 2 ♀♀ (DBC). *Ibid.*, 13.IV.06, F. Cassola, 2 ♂♂ 1 ♀ (FCC); D. Brzoska, 2 ♂♂ 1 ♀ (DBC). 11 km N Gimpu (S Palu), 01°31.8S-120°00.8E, 620 m, 5.V.05, F. Cassola, 1 ♂ 1 ♀ (FCC); D. Brzoska, 5 ♂♂ 2 ♀♀ (DBC). 6 km N Gimpu (S Palu), 01°33.8S-120°01.4E, 530 m, 5.V.05, D. Brzoska, 1 ♀ (DBC). 5 km N Gimpu (S Palu), 01°34.0S-120°01.4E, 520 m, 5.V.05, F. Cassola, 1 ♀ (FCC); D. Brzoska, 1 ♂ 1 ♀ (DBC). 40.2 km SW Mapane on Watutau rd, 01°35.6S-120°33.3E, 1090 m, 3.V.05, D. Brzoska, 1 ♀ (DBC). 6 km S Gimpu (S Palu), stream Halu (trib. of Lariang R.), 01°40.3S-120°02.8E, 400 m, 5.V.05, F. Cassola, 1 ♀ (FCC); D. Brzoska, 5 ♂♂ (DBC). NW side of Lake Poso, 6.9 km W Tonusu on Bada rd, 01°47.6S-120°30.3E, 1200 m, 1.V.05, F. Cassola, 1 ♀ (FCC); D. Brzoska, 2 ♂♂ 1 ♀ (DBC). W side of Lake Poso, Tonusu rd, 6 km S of Bada rd jct, 01°47.9S-120°31.8E, 525 m, 11.IV.06, F. Cassola, 1 ♂ (FCC); D. Brzoska, 1 ♀ (DBC). *Ibid.*, 11.IV.06, D. Brzoska, 6 ♂♂ 5 ♀♀ (DBC).

SULAWESI BARAT: Mambu-Tapua (NE Polewali), Tolo R., 03°15.3S-119°15.4E, 350 m, 19.III.07, D. Brzoska, 1 ♂ 1 ♀ (DBC).

SULAWESI SELATAN: Torajaland, 19 km E Rantepao on Palopo rd, 02°56.8S-120°01.8E, 565 m, 24.IV.05, D. Brzoska, 8 ♂♂ 3 ♀♀ (DBC). *Ibid.*, 25.IV.05, F. Cassola, 1 ♂ (FCC); D. Brzoska, 4 ♂♂ (DBC). 20 km W Soroako, 02°35.2S-121°18.6E, 500 m, 23.III.07, F. Cassola, 1 ♂ 2 ♀♀ (FCC); D. Brzoska, 1 ♂ 3 ♀♀ (DBC).

SULAWESI TENGGARA: Huduriah R. (nr Kendari airport), 04°05.7S-122°21.4E, 135 m, 1.IV.07, D. Brzoska, 1 ♂ 3 ♀♀ (DBC). *Ibid.*, 8.IV.07, D. Brzoska, 2 ♂♂ 2 ♀♀ (DBC). Amowito, Siama (nr Kendari airport), 04°06.0S-122°22.8E, 155 m, 31.III.07, F. Cassola, 1 ♀ (FCC). Sumber Sari (S Kendari), Moramo Waterfalls, 04°13.6S-122°44.1E, 85 m, 9.IV.07, D. Brzoska, 2 ♂♂ 1 ♀ (DBC).

Specimens collected: 334.

A small species, described from Manado (Sulawesi Utara) based on material collected by A.R. Wallace (SCHAUM 1861). It is easily recognizable from the very similar species, *Th. (Th.) waltheri*, mentioned below, by its pronotum fully and finely pubescent (clearly visible under the microscope only) and by the more cupric-violaceous colour of head and pronotum. In general, compared to the other species, *stenodera* is comparatively smaller and less black. It is known to occur from the tip of North Sulawesi southwards to the northern part of Sulawesi Selatan (CASSOLA 1991). New to Gorontalo, Sulawesi Barat and Sulawesi Tenggara.

27. *Thopectica (Thopectica) waltheri* (Heller, 1897)

SULAWESI BARAT: Mambu-Tapua (NE Polewali), Tolo R., 03°15.3S-119°15.4E, 350 m, 19.III.07, F. Cassola, 2 ♂♂ (FCC); D. Brzoska, 16 ♂♂ 4 ♀♀ (DBC). Tapango (NW Polewali), Palatta-Kondo, 03°15.9S-119°14.7E, 335 m, 19.III.07, F. Cassola, 1 ♂ 1 ♀ (FCC); D. Brzoska, 3 ♂♂ (DBC).

SULAWESI SELATAN: Torajaland, 19 km E Rantepao on Palopo rd, 02°56.7S-120°01.8E, 565 m, 24.IV.05, F. Cassola, 4 ♂♂ (FCC); D. Brzoska, 10 ♂♂ 5 ♀♀ (DBC). *Ibid.*, 25.IV.05, F. Cassola, 9 ♂♂ 2 ♀♀ (FCC), D. Brzoska, 6 ♂♂ 3 ♀♀ (DBC). Bakar Dam rd (E Polewali), km 2, 03°26.9S-119°35.3E, 650 m, 20.III.07, D. Brzoska, 1 ♂ (DBC). Bulu Dua (E Tanete), Siri R., 04°30.3S-119°47.2E, 700 m, 22.IV.05, D. Brzoska, 5 ♂♂ 1 ♀ (DBC). Malalang (50 km NE Makassar), Janabarang R., 05°16.2S-119°43.8E, 230 m, 18.IV.05, F. Cassola, 1 ♀ (FCC); D. Brzoska, 9 ♂♂ 5 ♀♀ (DBC). *Ibid.*, 11.III.07, D. Brzoska, 2 ♀♀ (DBC). Gowa-Kapacatala Falls, Bontotene (nr Molino), 05°16.5S-119°51.3E, 750 m, 11.III.07, D. Brzoska, 1 ♀ (DBC).

SULAWESI TENGGARA: 15.3 km E Kolaka on Kendari rd, 04°02.5S-121°43.9E, 260 m, 26.III.07, D. Brzoska, 1 ♀ (DBC). 10.3 km E Kolaka on Kendari rd, Palabo R., 04°02.7S-121°42.6E, 180 m, 26.III.07, F. Cassola, 1 ♂ 1 ♀ (FCC); D. Brzoska, 3 ♂♂ 3 ♀♀ (DBC). Buton I., 6.6 km N Maligano, 04°21.1S-122°56.2E, 250 m, 4.IV.07, D. Brzoska, 1 ♂ 1 ♀ (DBC). Buton I., 19 km N Maligano, 04°44.5S-122°57.7E, 40 m, 4.IV.07, D. Brzoska, 3 ♂♂ (DBC). Buton I., 2.7 km SE Bukit Asri, 05°08.1S-122°52.3E, 455 m, 3.IV.07, D. Brzoska, 7 ♂♂ 5 ♀♀

(DBC). Buton I., 0.5 km N Baubau, 05°26.7S-122°38.9E, 40 m, 2.IV.07, D. Brzoska, 3 ♀♀ (DBC). Buton I., 0.5 km N Baubau, 05°26.7S-122°38.9E, 40 m, 5.IV.07, D. Brzoska, 3 ♀♀ (DBC).

Specimens collected: 123.

Very similar to the preceding species, however easily distinguishable by the glabrous disc of pronotum, *waltheri* is a more strongly built species, apparently to be found in southern Sulawesi only. As it was already noted by CASSOLA (1991), a few specimens exhibit legs, antennae and sometimes the labrum rufescent instead of metallic black, thus giving the impression of a different species. New to Sulawesi Barat and Sulawesi Tenggara.

28. *Thopeutica (Thopeutica) aurothoracica* (W. Horn, 1897)

SULAWESI SELATAN: vinc. Bulla Dua, 04°30.7S-119°46.5E, 620 m, 14.III.07, D. Brzoska, 1 ♂ (DBC)

Specimens collected: 1.

This small species, initially collected in 1896 by Fruhstorfer near "Patunuang" (southern Sulawesi Selatan, inland from Makassar) and apparently never collected again, was luckily found at last in the same province as a single male specimen. This turned out to be identical to a topotypical female specimen in first author's collection. The pronotum is bright metallic gold with green to cupreous reflections while the head is dark to black with blue-green reflections on vertex and clypeus. The labrum is metallic cupreous-green. The elytra are fully dull black with the usual, roundish, well separated, elytral spots. Females have noticeable mesepisternal coupling sulci, a feature usually lacking in most *Thopeutica* species.

29. *Thopeutica (Thopeutica) subaurothoracica* n. sp. (fig. 26 a-d)

D i a g n o s i s . A small *Thopeutica (Thopeutica)* species similar to *Th. aurothoracica*, with a much excavated vertex and large protruding eyes. Head and pronotum more or less metallic golden-cupric; labrum testaceous-rufescent with sometimes a golden metallic hue. Elytra dull black with the usual five spots (small, roundish, more or less equally sized, placed apart from each other) and with

a rufescent apical lunula which extends along the apical border up to coalesce with the yellowish subapical spot and sometimes very narrowly with the submarginal middle spot. Sutural spine small but evident in both sexes; elytral apex briefly pointed in the male, very slightly emarginate in the female. Legs and appendages testaceous-rufescent.

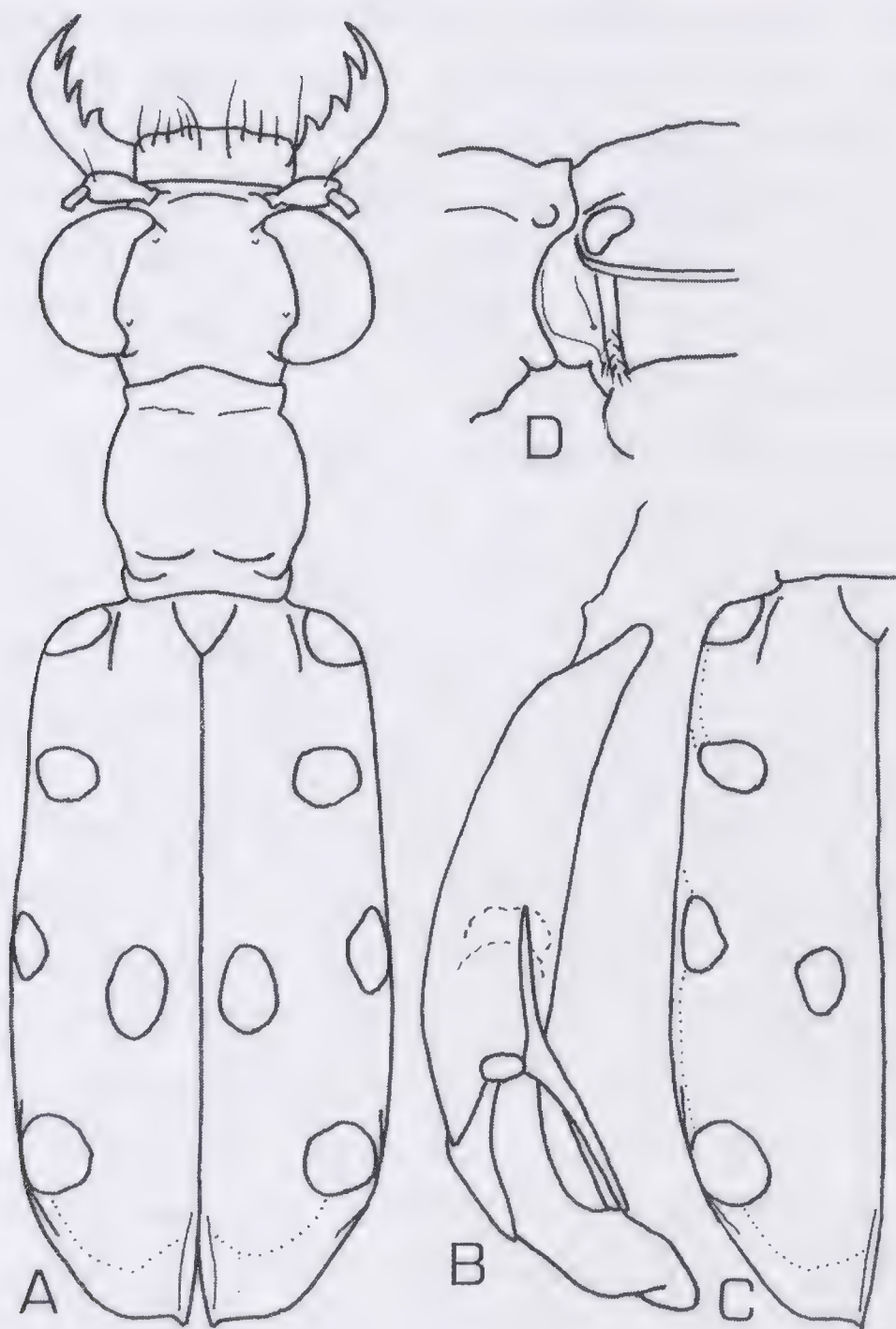


Fig. 26 - *Thopeutica (Thopeutica) subaurothoracica* n. sp., male paratype, from 23 km N Polewali: a. habitus; b. aedeagus; female paratype from same locality: c. left elytron; d. mesepisternal coupling sulcus.

Description. Head shining golden-cupreous in some specimens, shining black in others. Vertex much excavated in the middle, eyes large and bulky. Fully glabrous, just two sensorial setae at fixed loci near both eyes; clypeus and frons almost smooth, fine longitudinal striae on sides of vertex and on orbital declivities; striation of genae poorly evident, almost effaced. Labrum short, trans-

verse, testaceous-rufescent in most specimens, with a golden metallic hue laterally in some others, definitely metallic golden-cupric in one specimen of the type series; front part almost truncated, with the teeth nearly effaced, eight fine hairs near forward edge, sometimes 1-2 additional ones in the middle on disc. Mandibles basally testaceous, rufescent apically and on teeth. Mouth appendages and palpi testaceous, the last joint of palpi darkened apically. Antennae rather short, not reaching the half of the elytral length in male, a bit shorter in female, testaceous-rufescent with the last 3-4 antennomeres more or less darkened, a single seta on tip of scape; articles 3 and 4 almost bare, just 2-3 very small spiniform hairs in some specimens; antennomeres 5-11 dull brown, the last 3-4 almost black, evenly and very finely pubescent.

Thorax: pronotum subsquare, a bit longer than wide, rounded at sides, distinctly globose on disc, slightly narrower in front; smooth, glabrous, bright metallic coppery-red with golden-green reflections in most specimens, sometimes shining black with a violet hue. Postero-lateral tubercles small. Proepisterna smooth, fully glabrous, shining black to violet. Sternal pieces almost fully bare, just a few white short hairs on mesepimeron, the hind inner angle of metepisterna, the extreme lateral sides of sternum and the hind coxae margin. Female coupling sulcus a small but distinct pit in the middle of mesepisternum, close to the mesepimeral rim, however less marked and a bit lower than in *autothoracica*.

Elytra wider than head across eyes, moderately elongate, subparallel-sided, slightly enlarged behind, the maximum width behind the middle; sutural spine small but evident in both sexes, making the apex briefly pointed in the male, very slightly emarginate in the female. Colour dull black, briefly shining at base near the humeral dot, with a rufescent apical lunula which extends along the apical border up to coalesce with the yellowish subapical spot (sometimes even narrowly extending along the lateral margin up to the submarginal middle spot); rufescent apical area shallowly punctuated. No elytral mirror is detectable in female. Elytral markings consisting of the usual five spots (small, roundish, approximately equally sized, non-coalesced): humeral, subhumeral, submarginal middle, discal and subapical dots. Epipleura testaceous-rufescent.

First and second abdominal sternites more or less metallic black, the other sternites rufescent, almost glabrous, with just a very fine

short pubescence on 4th and 5th sternites. Coxae, trochanters and all legs testaceous-rufescent, with just a few rows of small spiniform hairs.

Aedeagus relatively elongate, tapering, arched, ending in a short blunt apex; inner sac with a convoluted flagellum readily visible through the wall of the penis, sometimes protruding outside from the apical opening.

Length: 8.8-9.9 mm (without labrum).

Holotype, ♂, and 3 paratypes (1 ♂ 2 ♀♀) from SULAWESI BARAT: 23.9 km N Polewali on Mamasa road, 03°18.9S-119°22.3E, 875 m, 26.IV.05, F. Cassola, 1 ♀; D. Brzoska, 2 ♂♂ 1 ♀. Ten further paratypes from same locality: 28.IV.05, F. Cassola, 1 ♂; D. Brzoska, 1 ♀; 16.III.07, D. Brzoska, 2 ♂♂ (DBC); 18.III.07, D. Brzoska, 1 ♂ (DBC); 20.III.07, F. Cassola, 1 ♂ 1 ♀ (FCC), D. Brzoska, 2 ♂♂ 1 ♀ (DBC). One more paratype from the same province: Bakar Dam road (E Polewali), km 2, 03°26.9S-119°35.3E, 650 m, 20.III.07, D. Brzoska, 1 ♂ (DBC). Eight additional paratypes (3 ♂♂ 5 ♀♀) from SULAWESI TENGAH: 11 km N Gimpu (S Palu), 01°31.8S-120°00.7E, 620 m, 5.V.05, D. Brzoska, 3 ♂♂ 2 ♀♀; 5 km N Gimpu (S Palu), 01°34.0S-120°01.4E, 520 m, 5.V.05, F. Cassola, 1 ♀; D. Brzoska, 1 ♀; 6 km S Gimpu (S Palu), stream Halu (tributary of Lariang R.), 01°40.4S-120°02.9E, 395 m, 5.V.05, F. Cassola, 1 ♀. Holotype deposited in the Museo Civico di Storia Naturale "G. Doria", Genova, Italy (MSNG); paratypes in authors' collections (FCC, DBC). Specimens collected: 23.

E t y m o l o g y . This new *Thopectica* species is so named because of its remarkable resemblance to *Th. (Th.) aurothoracica*, with which it was mistaken when we collected it in the field.

R e m a r k s . *Th. (Th.) subaurothoracica* was initially found along a densely vegetated streamlet in West Sulawesi, and was found again in Central Sulawesi. Due also to its small size and rapid escape response, it was very difficult to collect. Interestingly, this new species and the following one make it clear that the *aurothoracica* group probably includes more species and several more will possibly be discovered by future researches. *Th. subaurothoracica* is morphologically very similar to *aurothoracica* and a comparison with a single *aurothoracica* topotype female specimen (in FCC) proved the two to be definitely distinct, although obviously being close rel-

atives with each other. *Th. (Th.) aurothoracica* is slightly smaller in size on average, and it has a dark head (clearly contrasting with the golden metallic pronotum), metallic cupreous-green labrum and no rufescent areas on the elytra. Another member of the *aurothoracica* group, *Th. (Th.) whitteni* Cassola, 1991, is a wider, stouter species, with much more rufescent coloration on the elytra (even between the humeral and subhumeral spots). Finally, from the following species, *Th. subaurothoracica* differs because of the more shining lustre of head and pronotum, the more deeply excavated vertex between the eyes, the less emarginated elytral apex, the glabrous labrum, as well as by the apex of the aedeagus which is straighter, narrower and pointed, devoid of any dorsal hook apically.

30. *Thopeutica (Thopeutica) labrosetosa* n. sp. (fig. 27 a-d)

D i a g n o s i s . Similar to the preceding species, however immediately distinguished because of the longer pronotum, the darker, less shining head with less depressed vertex, the less protruding eyes, the larger elytral spots, the more emarginated elytral apex in both sexes, the different male aedeagus, and especially the distinctly setose labrum.

D e s c r i p t i o n . Head dark bronze with some cupric reflections on clypeus and genae, bluish-green on sides of vertex and the orbital declivities. Vertex not much excavated in the middle, eyes relatively less large and protruding than in the other small *Thopeutica* species of the *aurothoracica* group. Fully glabrous, just two sensorial setae at fixed loci near both eyes. Clypeus and frons finely wrinkled, longitudinal striae on vertex and orbital declivities fine but evident, the striae becoming somewhat wavy and oblique behind on neck; striation of genae evident, longitudinal. Labrum short, transverse, testaceous-rufescent with some metallic hue, a bit raised in front in the middle, with teeth nearly effaced; 9-10 long fine hairs near forward edge, and moreover several others (9-12) behind on disc, some of which inserted just near the hind rim, close to the clypeus. Mandibles fully testaceous-rufescent, a bit lighter in basal outer half. Mouth appendages and palpi fully testaceous, the last joint of palpi partly darkened apically. Antennae longer than in the preceding species, almost reaching the half of the elytral length

in male, a bit shorter in female; scape and articles 2-4 testaceous-rufescent, a single seta on tip of scape and 1-3 very small spiniform setae on 3rd and 4th, antennomeres 5-11 dull brown (just the last one a bit darkened), evenly and very finely pubescent.

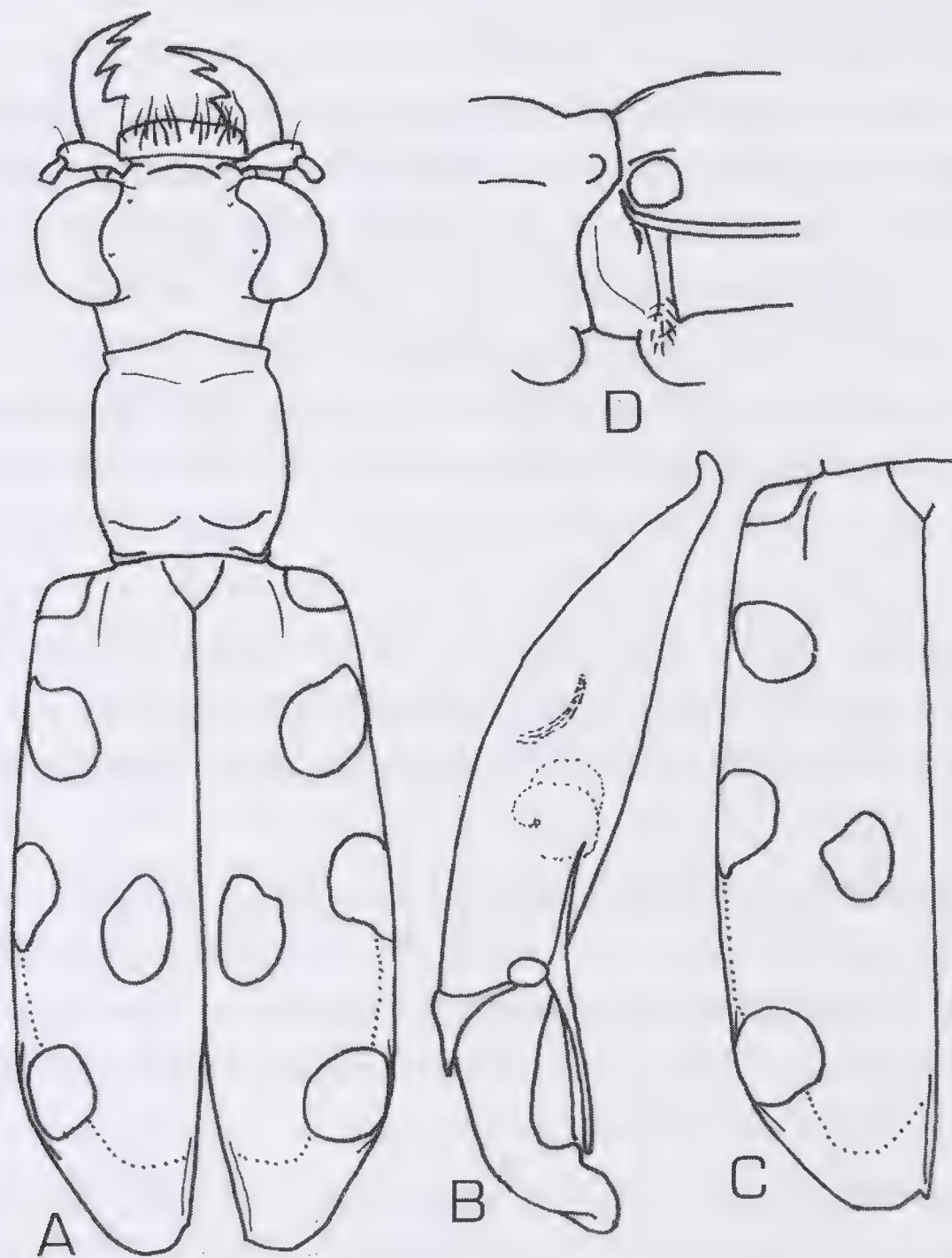


Fig. 27 - *Thopeutica (Thopeutica) labrosetosa* n. sp., male holotype: a. habitus; male paratype, from 23 km N Polewali: b. aedeagus; female paratype from same locality: c. left elytron; d. mesepisternal coupling sulcus.

Thorax: pronotum clearly longer than wide, with sides convergent in front, front lobe distinctly narrower than hind lobe; moderately globose on disc, the postero-lateral tubercles small. Glabrous, smooth (just a few uneven wrinkles in the middle of disc), bright coppery-red metallic reflections in the whole upper surface (with some greenish hue in the transverse grooves of the paratype specimen). Proepisterna smooth, violaceous to bluish; mostly glabrous, with some white long hairs in front part and near the coxae. Some

white pubescence on mesepimeron, ventral angle of mesepisternum, front part and sides of sternum, sides of hind coxae, extreme hind angle of metepisterna. Female coupling sulcus a marked groove a bit over the middle of mesepisternum, below the shoulder and close to the mesepimeral rim, in a much upper position than that of both the preceding species.

Elytra wider than head across eyes, very slightly rounded at sides, the maximum width around the middle; apex rounded, slightly retracted in the male, strongly emarginated in the female, sutural spine almost effaced in the male, very small but evident in the female. Dull black, rufescent apically (more widely in the male), the rufescent area reaching and contouring the subapical spot and also extending along the lateral border up to the submarginal middle spot as well; elytral punctuation clearly visible through within the rufescent area. No elytral mirror is detectable in female. Elytral markings consisting in the ordinary five spots (roundish, approximately equally sized, apart from each other): humeral, subhumeral, submarginal middle, discal and subapical dots. Epipleura testaceous-rufescent.

First and second abdominal sternites more or less metallic black, the other sternites rufescent, with short white pubescence almost everywhere. Coxae partially metallic cupreous, trochanters and legs fully testaceous-rufescent, with some white hairs on femora and a few spiniform hairs on all segments.

Aedeagus relatively elongate, tapering, arched, ending in a short apical rounded hook dorsally; inner sac with a with a convoluted flagellum readily visible through the wall of the penis.

Length: 9.5-10.2 mm (without labrum).

Holotype, ♂, from SULAWESI BARAT: 23.9 km N Polewali on Mamasa road, 03°18.9S-119°22.3E, 875 m, 26.IV.05, D. Brzoska. Four paratypes, from same locality and collector, but in different times: 28.IV.05, 1 ♀ (FCC); 16.III.07, 1 ♀ (DBC); 20.III.07, 1 ♂ (FCC), 1 ♀ (DBC). One more paratype from SULAWESI SELATAN: E Polewali, Bakarua Dam road, km 23.5, 03°29.6S-119°32.3E, 45 m, 20.III.07, D. Brzoska, 1 ♂ (DBC). Holotype deposited in the Museo Civico di Storia Naturale "G. Doria", Genova, Italy (MSNG); paratypes in authors' collections (FCC, DBC). Specimens collected: 6.

E t y m o l o g y . This new species is so named because of its distinctly setose labrum, which immediately helps to distinguish it from the other small *Thopeutica* of the *aurothoracica* group.

R e m a r k s . Much to our surprise, this new species was discovered while describing *Th. subaurothoracica*. Both species were collected in the same densely vegetated streamlet in West Sulawesi and were mixed together in the sample. However, *Th. labrosetosa* was apparently rarer and just six specimens were collected in all. It obviously differs from the above described species because of the longer pronotum, the darker, less shining head with less depressed vertex, the less protruding eyes, the slightly larger elytral spots, the more emarginate elytral apex in both sexes, the different male aedeagus, and especially the distinctly, fully setose labrum.

31. *Thopeutica (Thopeutica) grossipennis* n. sp. (fig. 28 a-c)

D i a g n o s i s . Similar to *Th. (Th.) subaurothoracica*, however clearly distinguished because of the labrum more produced in front in the middle, with two roundish excavations at the lateral sides, and especially by the much different, stouter aedeagus with a large spatulated apex. Female unknown.

D e s c r i p t i o n . Head cupreous red with some green reflections on vertex, genae and behind the eyes. Vertex wider, not much excavated in the middle, finely striated longitudinally at sides and on the orbital declivities, the striae becoming less evident and more transverse behind on neck; frons almost smooth. Fully glabrous, just two sensorial setae at fixed loci near both eyes. Striation of genae evident, longitudinal. Labrum short, transverse, fully testaceous in the holotype specimen, with some very slight cupric metallic hue laterally near the base in the paratype specimen; middle front edge produced in front, with two roundish excavations between it and the side edges; 11-12 fine setae near forward edge and 1-2 more behind on disc around the middle. Mandibles testaceous near the base, then rufescent in front, briefly darkened on teeth. Mouth parts and palpi fully testaceous-rufescent. Antennae testaceous, slightly darkened on antennomeres 9-11; scape and articles 2-4 glabrous, antennomeres 5-11 very finely and evenly pubescent.

Thorax: pronotum of the same colour as the head, approximately as long as wide, moderately globose on disc, the postero-lateral tuber-

cles small; surface almost smooth. Episterna smooth, almost black with some violet reflections, fully glabrous in the paratype specimen, with a few white erect hairs near the front rim of proepisterna in the holotype specimen. Some white sub-recumbent pubescence near the ventral corners of mesepimeron and extreme hind corner of metepisterna.

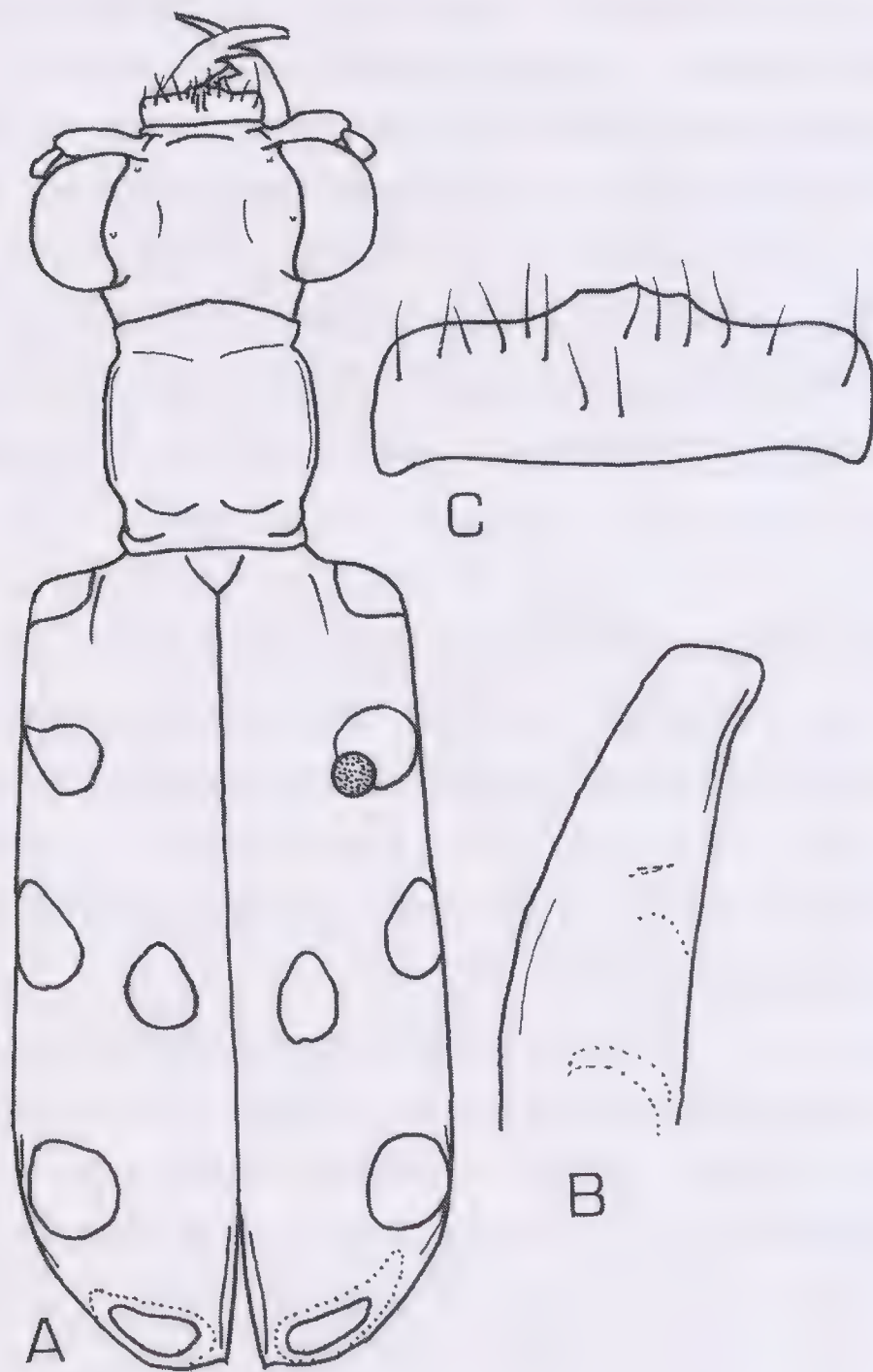


Fig. 28 - *Thopeutica (Thopeutica) grossipennis* n. sp., male holotype: a. habitus; b. apex of aedeagus; c. labrum.

Elytra dull black, slightly wider than head across eyes, very slightly rounded at sides, the maximum width behind the middle; apex rounded, slightly retracted (male), sutural spine very small but present. Elytral markings consisting in the usual five whitish roundish spots (humeral, subhumeral, lateral, discal and subapical) and moreover by a yellowish apical spot clearly apparent within a rufescent apical lunule. Epipleura dark rufescent.

Underside dark metallic black on the sternal pieces and the middle of the first abdominal sternites, otherwise the sternites testaceous-rufescent laterally and behind. Legs testaceous-rufescent with some rows of small white spiniform hairs.

Aedeagus relatively large, stout, with wide spatulated apex; inner sac typical of the genus *Thopectica*, with a convoluted flagellum readily visible through the wall of the penis.

Female unknown.

Length: 9.5-10.2 mm (without labrum).

Holotype, ♂, from SULAWESI BARAT: E Polewali, Bakarlu Dam road, km 2, 03°26.9S-119°35.3E, 650 m, 20.III.07, D. Brzoska, in first author's collection (FCC); paratype, ♂, from NE Polewali, Lemogamba, Salindu R., 03°21.4S-119°17.3E, 32 m, 19.III.07, D. Brzoska, in second author's collection (DBC). Specimens collected: 2.

E t y m o l o g y . This new species is so named because of its distinctly large aedeagus, very unlike that of the other closely related species.

R e m a r k s . Much to our surprise, this new species was discovered while describing *Th. subaurothoracica* and *Th. (Th.) labrosetosa*, both of which were collected in the same site as *Th. (Th.) grossipenis* or not far from it. Only two specimens were collected of the latter species but they obviously differ from the other two species because of the much different, larger and stouter aedeagus, which is not pointed or hooked apically.

32. *Thopectica (Pseudotherates) guttula* (Fabricius, 1801)

SULAWESI TENGAH: 24.3 km S of "km 4-Basidondo" (SW Tolitoli), 00°37.2N-120°39.8E, 1040 m, 8.IV.06, D. Brzoska, 1 ♂ (DBC). 40.2 km SW Mapane on Watutau rd, 01°35.6S-120°33.3E, 1090 m, 3.V.05, D. Brzoska, 1 ♂ (DBC).

SULAWESI TENGGARA: 11 km SE Asera (N Kendari), 03°34.7S-122°09.2E, 210 m, 30.III.07, D. Brzoska, 1 ♀ (DBC). Sila (NW Kolaka), Sila R., 03°42.7S-121°05.5E, 28 m, 25.III.07, D. Brzoska, 1 ♂ (DBC). Sumber Sari (S Kendari), Moramo Waterfalls, 04°13.6S-122°44.1E, 85 m, 31.III.07, F. Cassola, 2 ♂♂ (FCC). *Ibid.*, 9.IV.07, D. Brzoska, 2 ♂♂ (DBC).

Specimens collected: 8.

All the species belonging to the subgenus *Pseudotherates* Cassola, 1991, while having the male genitalia (in particular the inner sac of aedeagus) identical to those of typonominal *Thopectica* spe-

cies, exhibit a remarkable and intriguing similarity with species of the much distant genus *Therates* Latreille, 1817. It is obvious that some sort of mimicry is involved, as species of both genera can be found in the same habitats, sitting on leaves overhanging densely vegetated streams and streamlets. When encountered, *Pseudotherates* specimens can easily be mistaken for *Therates* specimens, and only a closer examination of the labrum, which unlike that of all *Therates* species is short and more “*Cicindela*”-like, allows a proper generic identification. Such an astonishing resemblance could well represent a stimulating, promising challenge for future field research on the eco-ethology of these species.

The specimens mentioned above can be ascribed to the *Th. guttula* complex, which, despite being the group’s very first species to be discovered and described, ironically is still one of the least known. However these specimens are quite unlike from each other. The specimen from 38 km SW of Mapane has fully rufescent elytra with just three yellow spots (humeral, subhumeral and subapical, the latter one large and extending almost to the suture, so as to form a wide nearly complete apical lunule). The one from 24.3 km S of Basidondo is fully metallic violet-black (thus more closely resembling “ssp.” *viridimetallica* W. Horn, 1914: CASSOLA 1991), with just a testaceous humeral spot and narrow apical lunule. Its size is slightly larger than that of the following species. It is possible that future researches will show *guttula* to include two or more different species, but much more material is needed to understand the range of variability in this species. New to Sulawesi Tengah.

33. *Thopectica (Pseudotherates) flavilabris* (W. Horn, 1914), **bona sp.**

SULAWESI TENGAH: 2.5 km S “km 4-Basidondo” (SW Tolitoli), 00°43.3N-120°37.0E, 100 m, 9.IV.06, F. Cassola, 1 ♂; D. Brzoska, 1 ♀ (DBC).

Specimens collected: 2.

The two specimens mentioned above have the front half of the elytra mostly rufescent, lacking the tiny discal dot which exists in other specimens, and are almost identical with several specimens in FCC, however differing by the rufescent metasternal pieces (CASSOLA 1991). Both the humeral and the subapical spots are yellow, roundish, clearly standing out against the rufescent area in which

they are included. *Th. (P.) flavilabris*, formerly considered to be a *guttula* subspecies (HORN 1914, CASSOLA 1991) is here tentatively raised to full specific status, also because the two specimens above were found at a short distance (some 20 kms approximately) from the *guttula* specimen mentioned above.

34. *Thopectica (Pseudotherates) muna* Cassola, 1997

SULAWESI TENGGARA: Buton I., 6.6 km N Maligano, 04°21.1S-122°56.2E, 250 m, 4.IV.07, D. Brzoska, 1 ♂ (DBC).

Specimens collected: 1.

This species was described also from Buton I., based on a small series from Wakarumba (CASSOLA 1997). It is obviously a close relative of *guttula*, however differing by the testaceous metasternal parts and the thicker, stout male aedeagus.

35. *Thopectica (Pseudotherates) apiceflava* Cassola, 1991

SULAWESI TENGAH: 12.9 km SW Mapane on Watutau rd, 01°31.2S-120°37.9E, 295 m, 13.IV.06, F. Cassola, 4 ♂♂ 1 ♀ (FCC); D. Brzoska, 4 ♂♂ 3 ♀♀ (DBC). 17.4 km SW Mapane on Watutau rd, 01°31.9S-120°37.5E, 326 m, 13.IV.06, F. Cassola, 3 ♀♀ (FCC); D. Brzoska, 3 ♂♂ 1 ♀ (DBC). 38 km SW Mapane on Watutau rd, 01°35.6S-120°33.3E, 1090 m, 13.IV.06, D. Brzoska, 1 ♀ (DBC). 44.1 SW Mapane on Watutau rd, 01°36.0S-120°32.5E, 1300 m, 13.IV.06, F. Cassola, 1 ♂ (FCC). NW side of Lake Poso, 6.9 km W Tonusu on Bada rd, 01°47.3S-120°30.1E, 1200 m, 1.V.05, F. Cassola, 1 ♂ 1 ♀ (FCC); D. Brzoska, 1 ♂ (DBC). *Ibid.*, 12.IV.06, F. Cassola, 2 ♂♂ (FCC). NW side of Lake Poso, 7.2 km W Tonusu on Bada rd, 01°47.5S-120°30.2E, 955 m, 12.IV.06, D. Brzoska, 4 ♂♂ 1 ♀ (DBC). W side of Lake Poso, Tonusu rd, 6 km S of Bada rd jct, 01°47.9S-120°31.8E, 525 m, 11.IV.06, F. Cassola, 1 ♂ (FCC); D. Brzoska, 5 ♂♂ 6 ♀♀ (DBC).

SULAWESI SELATAN: 41.5 km N Wotu, 02°20.5S-120°47.9E, 550 m, 30.IV.05, F. Cassola, 1 ♀ (FCC); D. Brzoska, 4 ♂♂ 1 ♀ (DBC). 20 km W Soroako, 02°35.2S-121°18.6E, 500 m, 23.III.07, F. Cassola, 1 ♂ (FCC); D. Brzoska, 7 ♂♂ 2 ♀♀ (DBC).

Specimens collected: 49.

This species is characterized by a large, subtriangular, apical yellow spot, which occupies the whole apical part of elytra and stands out against their slightly rufescent ground colour. This yellow apical spot is accompanied by a yellow humeral spot, a whitish, small, roundish spot in the middle of the elytron close to the lateral margin, and sometimes by a very small discal dot closer to the suture. As among

the type specimens two specimens have a darker, almost metallic black, elytral colour, it was fairly predictable (CASSOLA 1991) that the elytra could sometimes be found to be frankly metallic black (except for the basal and apical parts). Apparently new to Sulawesi Selatan.

The specimens mentioned above from 41.5 km N of Wotu have turned out to be almost identical to two *apiceflava* type specimens in FCC. Most other specimens have fully metallic black-violet elytra (except for the basal and apical areas) and one single sublateral spot in the middle (not doubled by a second smaller one more on disc a bit obliquely positioned behind), thus being more reminiscent of *djufriana* Matalin, 1998, described from Kulawi in Central Sulawesi, which should differ by the metathorax (metepisterna included) fully violet-black, while our specimens have the underside almost fully rufescent. It is possible that *djufriana* will turn out to be conspecific with *apiceflava* in the future.

Quite unexpectedly, this species was found in the same area (Badar rd nr Tonusu, North side of Lake Poso) which includes the type locality ("Tonusu bei Tentena") of *Th. (P.) gerstmeieri* Werner & Wiesner, 1997, also reported a second time from the same area (WERNER & WIESNER 1997, 1999). This latter species was not found by us. Biodiversity in the subgenus *Pseudotherates* is definitely remarkable.

36. *Thopectica (Pseudotherates) albapicalis* (W. Horn, 1892)

SULAWESI TENGGARA: 5.6 km SE Asera (N Kendari), 03°34.4S-122°08.4E, 70 m, 29.III.07, F. Cassola, 2 ♂♂ 1 ♀ (FCC); D. Brzoska, 3 ♂♂ 2 ♀♀ (DBC). 11 km SE Asera (N Kendari), 03°34.7S-122°09.2E, 210 m, 29.III.07, F. Cassola, 1 ♂ (FCC); D. Brzoska, 1 ♀ (DBC).

Specimens collected: 10.

Comparison with two topotype specimens from Tombugu (in FCC) made the identification of the above specimens to be obvious. Unlike the following species, this one has the elytra almost fully testaceous-rufescent. New to Sulawesi Tenggara.

37. *Thopectica (Pseudotherates) beccarii* Cassola, 1991 (fig. 16)

SULAWESI TENGGARA: 25.7 km S Sawa (N Kendari), 03°55.2S-122°23.3E, 25 m, 28.III.07, F. Cassola, 1 ♂ 1 ♀ (FCC); D. Brzoska, 2 ♂♂ (DBC). 27.2 km W Kendari, 03°58.9S-122°22.4E, 28 m, 28.III.07, F. Cassola, 5 ♂♂ 2 ♀♀ (FCC);

D. Brzoska, 5 ♂♂ 1 ♀ (DBC). *Ibid.*, 30.III.07, F. Cassola, 3 ♂♂ 2 ♀♀ (FCC); D. Brzoska, 6 ♂♂ 3 ♀♀ (DBC). *Ibid.*, 9.IV.07, D. Brzoska, 5 ♂♂ 1 ♀ (DBC). 10.3 km E Kolaka on Kendari rd, Palabo R., 04°02.7S-121°42.6E, 180 m, 26.III.07, F. Cassola, 1 ♂ (FCC); D. Brzoska, 4 ♂♂ (DBC). 7.5 km E Kolaka on Kendari rd, 04°03.6S-121°42.0E, 80 m, 26.III.07, D. Brzoska, 1 ♀ (DBC). Sumber Sari (S Kendari), Moramo Waterfalls, 04°13.6S-122°44.1E, 85 m, 31.III.07, D. Brzoska, 3 ♂♂ 1 ♀ (DBC). *Ibid.*, 9.IV.07, D. Brzoska, 3 ♂♂ 4 ♀♀ (DBC). Buton I., 6.6 km N Maligano, 04°21.1S-122°56.2E, 250 m, 4.IV.07, D. Brzoska, 1 ♂ 2 ♀♀ (DBC). Buton I., 2.7 km SE Bukit Asri, 05°08.1S-122°52.3E, 455 m, 3.IV.07, D. Brzoska, 12 ♂♂ 2 ♀♀ (DBC).

Specimens collected: 85.

Obviously a close relative of both *apiceflava* and *albapicalis*, this species was described from Kendari, where it was collected in 1874 by the Italian famous botanist Odoardo Beccari (CASSOLA 1991). We also collected it around Kendari and also in the northern south-east peninsula near Soroako (Sulawesi Selatan). This species has the same large subapical spots as *albapicalis* W. Horn, but its elytral disc is metallic black-violet, the rufescent colouration being more or less reduced to its basal fourth only (sometimes more extended behind). The humeral spot is conspicuous and usually coalescent with the smaller subhumeral spot sometimes to form a larger yellow humeral lunule (fig. 16). Most of our specimens lack the smaller discal spot. Moreover, the small subapical dot is mostly connected with the large yellowish apical spot (or more clearly apparent within the latter) and the metepisterna are often more or less blackened.

38. *Thopeutica (Pseudotherates) alexanderriedeli* Werner & Wiesner, 1999

SULAWESI BARAT: 27 km N Polewali on Mamasa rd, 03°18.2S-119°22.6E, 1080 m, 28.IV.05, D. Brzoska, 2 ♂♂ (DBC). 23.9 km N Polewali on Mamasa rd, 03°18.9S-119°22.3E, 877 m, 26.IV.05, F. Cassola, 1 ♂ (FCC). *Ibid.*, 28.IV.05, F. Cassola, 1 ♂ (FCC); D. Brzoska, 1 ♂ 2 ♀♀ (DBC). *Ibid.*, 16.III.07, F. Cassola, 1 ♂ (FCC); D. Brzoska, 1 ♂ (DBC). *Ibid.*, 20.III.07, D. Brzoska, 1 ♂♂ 2 ♀♀ (DBC).

Specimens collected: 12.

This relatively large species was described based on five specimens from Palu, Sulawesi Tengah (WERNER & WIESNER 1999). We found it also in West Sulawesi. Our specimens agree well with the species' description and figures, differing only slightly by having the middle yellowish dots placed in a more transverse position. Moreover, some specimens differ from the type specimens figured by

WERNER & WIESNER (1999) by having the front rufescent part of elytra extended so as to encompass the posthumeral dot and basal callus.

39. *Thopectica (Pseudotherates) theratoides* (Schaum, 1861)

SULAWESI UTARA: NE Mapolo (N Manado), 00°59.9N-124°31.8E, 365 m, 2.IV.06, F. Cassola, 1 ♂ (FCC); D. Brzoska, 2 ♂♂ 2 ♀♀ (DBC). 4 km N Mapolo (N Manado), Owasan R., 00°59.8N-124°31.4E, 286 m, 2.IV.06, D. Brzoska, 2 ♂♂ 4 ♀♀ (DBC). SW of Tolitoli, 2.5 km S of "km 4-Basidondo" (SW Tolitoli), 00°43.3N-120°37.0E, 100 m, 9.IV.06, F. Cassola, 3 ♂♂ 3 ♀♀ (FCC); D. Brzoska, 13 ♂♂ 4 ♀♀ (DBC). Molibagu rd, 00°28.5N-123°58.3E, 225 m, 4.IV.06, F. Cassola, 1 ♀ (FCC). 8.9 km N Molibagu, 00°26.6N-123°58.2E, 210 m, 5.IV.06, F. Cassola, 11 ♂♂ 12 ♀♀ (FCC); D. Brzoska, 25 ♂♂ 20 ♀♀ (DBC). 7.8 km N Molibagu, 00°25.9N-123°58.0E, 200 m, 5.IV.06, D. Brzoska, 1 ♂ (DBC).

Specimens collected: 104.

This species apparently is a North Sulawesi endemic. It is easily recognizable because of the golden greenish to cupric metallic labrum. A record from the Philippines (WIESNER 1980) is possibly an erroneous identification (WIESNER 1992).

40. *Wallacedela major* (Cassola, 1991), **comb. nova** (fig. 29 a-d)

SULAWESI TENGGARA: 10.3 km E Kolaka on Kendari rd, Palabo R., 04°02.7S-121°42.6E, 180 m, 26.III.07, F. Cassola, 2 ♂♂ 2 ♀♀ (FCC); D. Brzoska, 6 ♂♂ 2 ♀♀ (DBC).

Specimens collected: 12.

This species was described by the first author, based on a single female specimen from Soroako (north-eastern Sulawesi Selatan), as belonging to the subgenus *Pseudotherates* of the genus *Thopectica* (CASSOLA 1991). Much to our surprise, however, upon closer examination of the newly collected specimens, which also make the species to be new to Sulawesi Tenggara, it turned out instead to belong to the genus *Wallacedela* Cassola, 1991. The narrow, elongate aedeagus, devoid of a flagellum in its inner sac and having a long narrower apex slightly hooked on the ventral side, is definitely distinctive. Unlike the single female holotype specimen, the subhumeral and middle lateral spots are present in these specimens, and the coupling sulcus is apparent as a deep pit just below the epipleural line. The spots are yellow, connected by the ground rufes-

cent colouration which covers the basal callus and the front part of the elytra (nearly the front half of the elytra in a female specimen, the front quarter in a male specimen), and laterally extends downwards to the middle spots and narrowly along the margins to the subapical spot, finally covering the whole apical area between the subapical spots. The elytral disc (except where rufescent) is metallic black as in the genus *Therates* and in the *Thopectica* species of the subgenus *Pseudotherates*. One female specimen has exactly the same pattern of rufous colouration as the type specimen (CASSOLA 1991, fig. 21e). Also the female specimen from Kolaka, Sanggona Base Camp (in the Nationaal Natuurhistorisch Museum of Leiden, The Netherlands), erroneously identified by CASSOLA (1996) as *Thopectica* (*Pseudotherates*) *g. guttula* (Fabricius, 1801), has more correctly to probably be ascribed to this species.

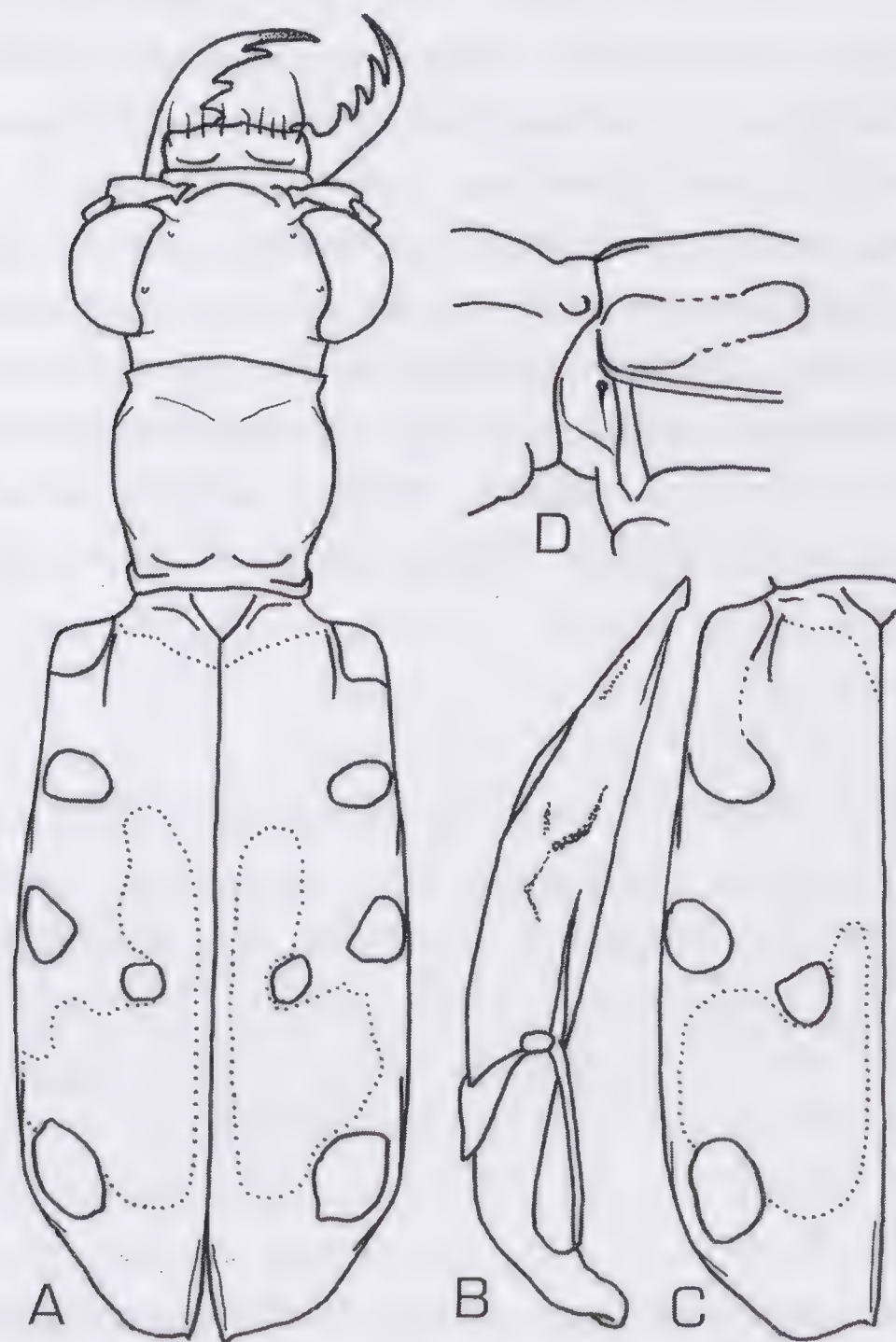


Fig. 29 - *Wallacedela major* (Cassola, 1991), male specimen from 10.3 km E Kolaka: a. habitus; b. aedeagus; female specimen from same locality: c. left elytron; d. mesepisternal coupling sulcus.

This, in fact, is the first *Wallacedela* species surprisingly having a theratoid facies, thus being much more reminiscent of a *Thopeutica* species of the subgenus *Pseudotherates*. It demonstrates how hazardous is to identify a species belonging to the genera *Thopeutica* or *Wallacedela* based on female specimens only. The discovery of a *Wallacedela* species having a theratoid appearance is an interesting biological phenomenon indeed and makes it obvious that both the genera *Thopeutica* and *Wallacedela* may include species which for unknown reasons are remarkable mimics of the *Therates* species. Ironically, the species name (*major*), which was fully appropriated when the species was thought to belong to *Pseudotherates*, is completely inappropriate in the genus *Wallacedela*, as in this genus it is perhaps the smallest species (except for *W. togiana* Cassola, 1991, from the Togian Islands).

Description of the male. Labrum transverse, subrectangular, slightly produced in the middle, with 10-12 small fine setae near forward edge. Mandibles testaceous in basal half, rufescent apically, briefly blackened on teeth. Mouth parts, antennomeres 1-4 and legs testaceous, almost bare; antennomeres 5-11 dull black, finely and evenly pubescent. Front fourth of elytra and elytral apex testaceous-rufescent, the discal area in between more or less fully metallic black with some green to bluish-violet reflections. Aedeagus tapered, narrow, almost straight, with a small apical hook on the ventral side; inner sac typical of the genus *Wallacedela*, devoid of a flagellum.

41. *Wallacedela eximia* (Van der Linden, 1829)

SULAWESI UTARA: Tonbohon (N Manado), Danopola R., 01°34.7N-124°56.4E, 50 m, 28.III.06, D. Brzoska, 1 ♀ (DBC). N Tondano on Sampiri rd, 01°23.1N-124°56.0E, 285 m, 30.III.06, D. Brzoska, 2 ♂♂ 1 ♀ (DBC). E Tomohon, rd to the waterfalls, 01°22.6N-124°50.5E, 700 m, 31.III.06, F. Cassola, 3 ♀♀ (FCC); D. Brzoska, 8 ♂♂ 5 ♀♀ (DBC). NE Tondano on Airmadidi rd, 01°19.8N-124°55.5E, 680 m, 30.III.06, F. Cassola, 1 ♂ 1 ♀ (FCC); D. Brzoska, 4 ♂♂ 1 ♀ (DBC).

Specimens collected: 27.

Despite the apparent loss of the holotype specimen, this species was interpreted to be the one from North Sulawesi, also collected by Wallace, which has testaceous labrum and appendages, a transverse bilobed fascia in the middle of the elytra, a deep female

coupling sulcus high below the shoulder, and a male aedeagus with a short ventral apical hook (CASSOLA 1991). Antennae are mostly rufescent with the last antennomeres more or less dull black. The specimens listed above well agree with such a description. *W. eximia* was recorded by CASSOLA (1996) and MATALIN (1998) from the Moluccas (Ambon) as well.

Because in *Wallacedela* the shape and position of female coupling sulci represent important characters for distinguishing the various species, all female specimens should be prepared in such a way that the antennae or legs do not obstruct the examination of mesepisterna and mesepimera.

42. *Wallacedela judithae* n. sp. (fig. 30 a-d)

D i a g n o s i s . A close relative of *W. eximia* but with the elytral spots separated (only rarely the middle ones narrowly coalescent with each other). Labrum and legs testaceous; antennomeres basically rufescent, the last 1-5 ones more or less darkened; abdominal sternites 7-4 and side edge of sternite 3 more or less rufescent; coupling sulcus a shallow cavity high below the shoulder, followed by a shallow rounded dorso-ventral groove; apex of male aedeagus long, straight, with a very small ventral hook.

D e s c r i p t i o n . Head shiny black, with cupric or green reflections on clypeus, front part of vertex, antennal plates, behind the eyes and on genae; glabrous, just two fine sensorial setae or setigerous punctures on fixed loci near both eyes. Clypeus and frons almost smooth, declivities of eyes and vertex very finely striated longitudinally, the striations becoming oblique behind on neck; genae also longitudinally striated. Labrum rufescent (sometimes with a slight metallic cupric hue), transverse, much wider than long, slightly unidentate in front middle, with 10-12 hairs near forward edge and 1-2 additional ones in the middle of disc. Mandibles testaceous basally, rufescent apically. Mouth parts fully testaceous, except for the tip of the last joints of palpi which are more or less metallic dark. Antennae as long as nearly to the first quarter of the elytral length in male, slightly shorter in female; scape and 2nd article of antennae rufescent, one single erect seta on tip of scape; articles 3-4 almost bare, rufescent with a very slight metallic hue;

antennomeres 5-11 dull rufescent, the last 3-4 dull black, finely and evenly pubescent.

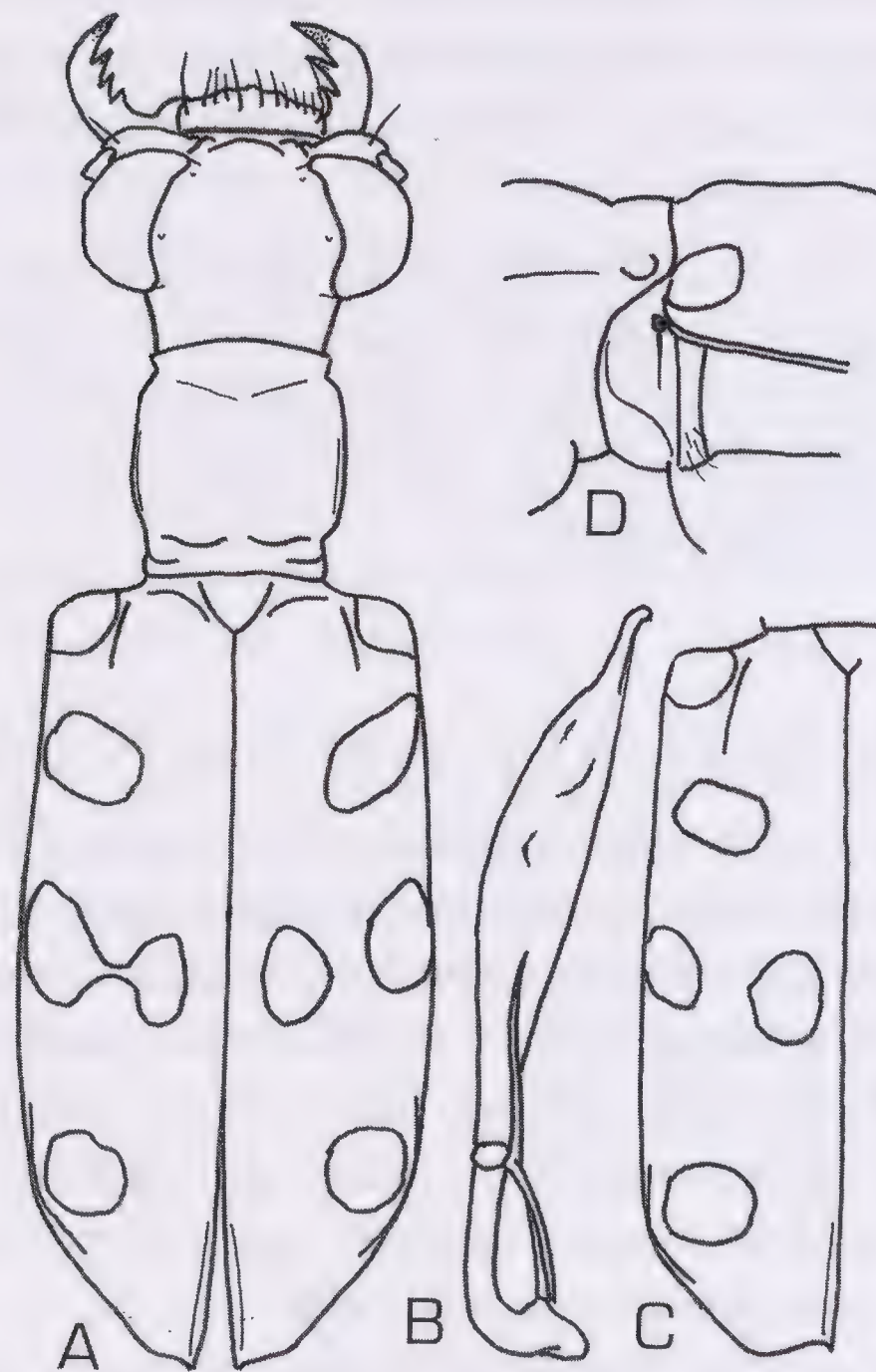


Fig. 30 - *Wallacedela judithae* n. sp., male paratype: a. habitus; b. aedeagus; female paratype: c. left elytron; d. mesepisternal coupling sulcus.

Pronotum approximately as long as wide, rounded and globose on disc, the lateral sides subparallel or slightly convergent in front; smooth, glabrous, the longitudinal line in the middle of the median lobe effaced; shiny black, with roseate-cupric reflections on the front lobe, the hind tubercles and the hind margin of the hind lobe; hind tubercles small. Epipleural rim effaced; episterna shiny black, glabrous, with a few white erect to subrecumbent hairs near the front margin, the ventral sides of mesepisterna and mesepimera, the lateral sides of sternum, the hind corner of metepisterna and the coxae; female mesepisternal coupling sulcus a shallow cavity high below the shoulder, followed by a rounded dorso-ventral groove.

Elytra wider than head across eyes, with well-marked shoulders; sutural spine very small in male, more appreciable in female; elytral apex pointed in male, obviously emarginated in female. Colour wholly dull black, in a few specimens with a rufescent apex, with no female elytral "mirror". Elytral markings consisting in five yellow roundish separate spots: humeral, large, more polished and shiny than the others; subhumeral, large, subhorizontal; middle lateral, subtriangular, slightly pointed inwards; discal, in a few specimens narrowly coalescent with the lateral one; subapical, sometimes connected with a poorly-defined, rufescent apical lunule. Epipleura narrow, rufescent.

Underside shiny black, abdominal sternites glabrous, mostly rufescent, except for the first ones and the middle of 4th which are black. Trochanters and legs rufescent.

Aedeagus narrow, tapered, inflated in the apical third, with the apex long, narrow, straight, with a very small ventral hook; inner sac of aedeagus typical of the genus *Wallacedela*, devoid of any flagellum.

Length: 11-12.2 mm (without labrum).

Holotype, ♂, and eight paratypes (6 ♂♂, 2 ♀♀) from SULAWESI UTARA: SW of Lake Tondano, San Dangan nr Kakas, 01°09.7N-124°53.3E, 720 m, 30.III.06, F. Cassola, 2 ♂♂ 1 ♀; D. Brzoska, 5 ♂♂ 1 ♀. Thirty-five additional paratypes from two different localities of the same area: Romoong Atob, Tunaan R., 01°13.6N-124°44.3E, 550 m, 1.IV.06, F. Cassola, 8 ♂♂ 3 ♀♀; D. Brzoska, 10 ♂♂ 6 ♀♀, and Desa Kiawa II, Ranowangko R., 01°12.7N-124°47.4E, 675 m, 31.III.06, F. Cassola, 1 ♀; D. Brzoska, 3 ♂♂ 4 ♀♀. Holotype deposited in the Museo Civico di Storia Naturale "G. Doria", Genova, Italy (MSNG); paratypes in authors' collections (FCC, DBC). Specimens collected: 44.

E t y m o l o g y . This new *Wallacedela* species is dedicated to second author's wife, Judith (Judy) Brzoska, who patiently has supported her husband's lifelong study of tiger beetles and also helped him visit Sulawesi three times to accomplish this study.

R e m a r k s . This species was mistakenly thought to be *eximia* when in the field. However, the separate roundish spots, the differently shaped coupling sulci in females, and the longer, straighter aedeagal apex of males suggest specific separation, despite the short distance from the localities where *eximia* was found.

43. *Wallacedela pseudofulvescens* Cassola & Wiesner, 2001

SULAWESI TENGGARA: 5.6 km SE Asera (N Kendari), 03°34.4S-122°08.4E, 70 m, 29.III.07, D. Brzoska, 1 ♂ (DBC). 11 km SE Asera (N Kendari), 03°34.7S-122°09.2E, 210 m, 29.III.07, F. Cassola, 1 ♂ (FCC); D. Brzoska, 2 ♂♂ 3 ♀♀ (DBC). *Ibid.*, 30.III.07, D. Brzoska, 1 ♀ (DBC). 27.2 km W Kendari, 03°58.9S-122°22.4E, 28 m, 28.III.07, F. Cassola, 5 ♂♂ 2 ♀♀ (FCC); D. Brzoska, 3 ♂♂ 5 ♀♀ (DBC). *Ibid.*, 30.III.07, F. Cassola, 1 ♀ (FCC); D. Brzoska, 3 ♂♂ (DBC). *Ibid.*, 8.IV.07, D. Brzoska, 1 ♂ (DBC). *Ibid.*, 9.IV.07, D. Brzoska, 2 ♀♀ (DBC).

Specimens collected: 30.

A small species (10-11 mm) which was thought to be a new one when in the field. Closer examination showed that it is instead this species, which was described (CASSOLA & WIESNER 2001) based on just a pair specimens from the Kendari airport area. The apex of the aedeagus of the holotype specimen was probably misinterpreted in the original description, actually it is slightly hooked on the ventral side, thus being more similar to that described and figured by MATALIN (1998) for his *W. kurbatovi*, from a site not far from the above recorded ones (environs of Kolaka), which has a “small but distinct apical hook”. Female coupling sulci of *pseudofulvescens*, however, are very unlike those described by MATALIN (1998) and distinctly positioned much more in top than those of *kurbatovi*. Conspecificity of course is a possibility and in such a case Matalin’s name would obviously have priority.

44. *Wallacedela butonensis* Cassola, 1996 (fig. 17)

SULAWESI TENGGARA: Buton I., 6.6 km N Maligano, 04°21.1S-122°56.2E, 250 m, 4.IV.07, D. Brzoska, 2 ♂♂ (FCC), 5 ♂♂ (DBC). Buton I., Wakarumba, 04°56.3S-122°50.4E, 20 m, 5.IV.07, D. Brzoska, 1 ♂ 1 ♀ (FCC), 8 ♂♂ 1 ♀ (DBC). Buton I., 2.7 km SE Bukit Asri, 05°08.1S-122°52.3E, 455 m, 3.IV.07, D. Brzoska, 1 ♂ (FCC), 5 ♂♂ 2 ♀♀ (DBC). Buton I., 0.5 km N Baubau, 05°26.7S-122°38.9E, 40 m, 5.IV.07, D. Brzoska, 1 ♂ (DBC).

Specimens collected: 27.

A small species (length: 11-11.6 mm without labrum), described by the first author based on specimens also coming from Wakarumba, Buton Island (CASSOLA 1996). The invasive rufescent colouration on the elytra and the straight, transverse middle band (sometimes a bit expanded near the suture) make it easily recognizable. However, a few specimens have two separate spots instead of a transverse middle band.

45a. *Wallacedela horii horii* Cassola, 1991 (fig. 18)

SULAWESI TENGAH: W side of Lake Poso, Tonusu rd, 6 km S of Bada rd jct, 01°47.9S-120°31.8E, 525 m, 11.IV.06, D. Brzoska, 3 ♂♂ 1 ♀ (DBC).

SULAWESI SELATAN: Torajaland, 10.7 km N Rantepao, 02°55.4S-119°50.8E, 1270 m, 22.III.07, D. Brzoska, 22 ♂♂ 9 ♀♀ (DBC). Torajaland, 9.5 km N Rantepao, 02°55.8S-119°51.1E, 1140 m, 21.III.07, D. Brzoska, 12 ♂♂ 4 ♀♀ (DBC). *Ibid.*, 22.III.07, F. Cassola, 14 ♂♂ 3 ♀♀ (FCC); D. Brzoska, 45 ♂♂ 18 ♀♀ (DBC). Torajaland, 8 km N Rantepao, 02°56.3S-119°51.4E, 1120 m, 21.III.07, F. Cassola, 2 ♂♂ 2 ♀♀ (FCC); D. Brzoska, 3 ♂♂ (DBC). Torajaland, 19.5 km E Rantepao on Palopo rd, 02°56.3S-120°01.8E, 565 m, 24.IV.05, F. Cassola, 19 ♂♂ 14 ♀♀ (FCC); D. Brzoska, 22 ♂♂ 13 ♀♀ (DBC). *Ibid.*, 25.IV.05, F. Cassola, 5 ♂♂ 4 ♀♀ (FCC); D. Brzoska, 2 ♂♂ 2 ♀♀ (DBC). Torajaland, 21 km W Palopo, Paredean R., 02°57.0S-120°05.6E, 575 m, 22.III.07, D. Brzoska, 6 ♂♂ 3 ♀♀ (DBC).

Specimens collected: 228.

Obviously a member of the *eximia*-group, with testaceous labrum and appendages and partially rufescent elytra, this *Wallacedela* species, described from the environs of Palopo, northern Sulawesi Selatan, but also from Palolo near Palu, Sulawesi Tengah (CASSOLA 1991), is characterized by the invading rufescent coloration on elytra, which extends along the whole suture and to the humeral area, sometimes even on the greater part of elytra (especially in females). The partially rufescent colour of elytra is conspicuous in the field (fig. 16). Moreover, the non-hooked, straight apex of male aedeagus and the position of female mesepisternal coupling pit are diagnostic. The specimens from 20 km W of Soroako are remarkable for having a smaller amount of rufescent colouration in the front half of the elytra, and the suture narrowly rufescent just below the scutellum in most specimens.

45b. *Wallacedela horii paucirufescens* n. ssp.
(fig. 31 a-d)

Diagnosis. Specimens from the south-eastern peninsula differ from typical *horii* because they have a slightly smaller size and have a lesser amount of rufescent colouration on the elytra (narrowly going along the marginal side up to the subhumeral spot, and in a few specimens touching the humeral spot). The rufescence also narrowly extends along the suture up to nearly the scutellum in some specimen, but more commonly stops just beyond the elytral middle.

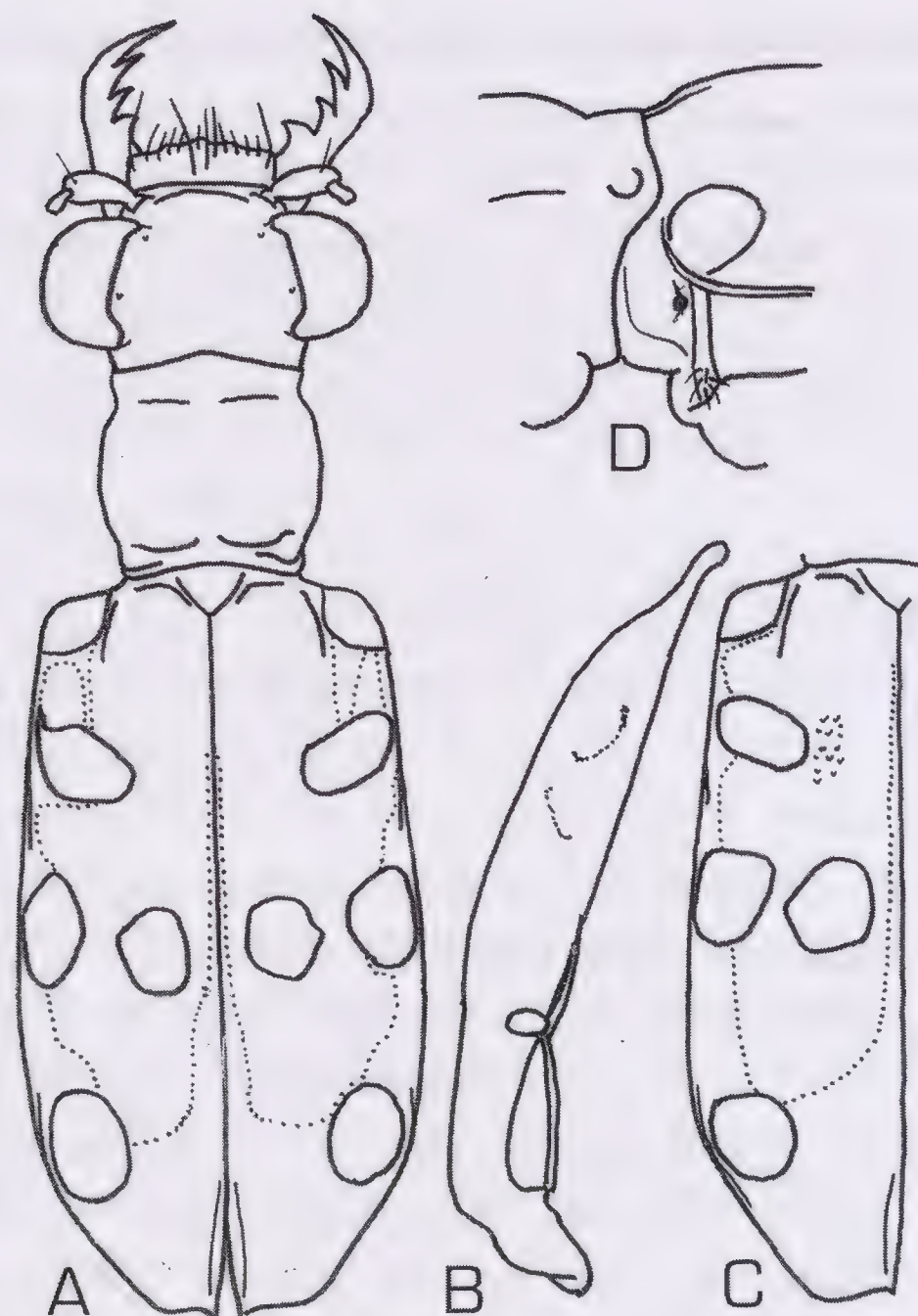


Fig. 31 - *Wallacedela horii paucirufescens* n. ssp., male paratype: a. habitus; b. aedeagus; female paratype: c. left elytron; d. mesepisternal coupling sulcus.

Description. Head and pronotum metallic black with some cupric to green and violet slight reflections. Elytra dull black with the usual five roundish yellow spots. Rufescent colouration reduced in comparison to that of typical *horii*, occupying just the elytral apex and narrowly going along the marginal side up to the the subhumeral spot (in some instances even narrowly reaching to the humeral spot), as well as along the suture just beyond the elytral middle, almost reaching the scutellum in some specimens. Sometimes the rufescent colouration is more developed in the apical part of the elytra, connecting the rufescent elytral basis with the discal spot along the suture, then becoming very narrow above the discal spots. Mouth parts, labrum, articles 1-4 of the antennae and legs testaceous-rufescent. Female coupling sulci a deep pit up the middle of mesepisterna, close to the mesepimeral rim, below the line of

epipleura, slightly extended up and down into a shallow rounded groove. Male aedeagus tapered, arched, apically straight as that of typical *horii* but sometimes slightly hooked on the ventral side.

Length: 11-12 mm (without labrum).

Holotype, ♂, and 37 paratypes from SULAWESI SELATAN: 20 km W Soroako, 02°35.2S-121°18.6E, 500 m, 23.III.07, F. Cassola, 6 ♂♂ 4 ♀♀; D. Brzoska, 13 ♂♂ 15 ♀♀. Three additional paratypes from SULAWESI TENGGARA: 3.9 km SE of Asera (N Kendari), 03°34.4S-122°08.4E, 70 m, 29.III.07, F. Cassola, 2 ♂♂; 11 km SE Asera (N Kendari), 03°34.7S-122°09.2E, 210 m, 29.III.07, D. Brzoska, 1 ♂. Holotype deposited in the Museo Civico di Storia Naturale "G. Doria", Genova, Italy (MSNG); paratypes in authors' collections (FCC, DBC). Specimens collected: 41.

Remarks. It is possible that two *horii* type specimens from northern south-east peninsula (CASSOLA 1991) will turn out to belong to this form instead, as the area where they were collected (Malili) is not far from Soroako.

46. *Wallacedela duffelsi* Cassola, 1991

SULAWESI TENGAH: 11 km N Gimpu (S Palu), 01°31.8S-120°00.7E, 620 m, 5.V.05, F. Cassola, 1 ♀ (FCC); D. Brzoska, 7 ♂♂ (DBC). 6 km N Gimpu (S Palu), 01°33.8S-120°01.5E, 530 m, 5.V.05, F. Cassola, 1 ♂ (FCC). 5 km N Gimpu (S Palu), 01°34.0S-120°01.4E, 520 m, 5.V.05, D. Brzoska, 2 ♂♂ 1 ♀ (DBC). 6 km S Gimpu (S Palu), stream Halu (trib. of Lariang R.), 01°39.9S-120°02.7E, 5.V.05, 400 m, F. Cassola, 1 ♂ 1 ♀ (FCC); D. Brzoska, 7 ♂♂ 2 ♀♀ (DBC).

SULAWESI BARAT: Mambu-Tapua (NE Polewali), Tolo R., 03°15.3S-119°15.4E, 350 m, 19.III.07, D. Brzoska, 2 ♂♂ 1 ♀ (DBC). 37 km N Polewali on Mamasa rd, 03°15.4S-119°20.6E, 885 m, 26.IV.05, D. Brzoska, 1 ♀ (DBC). *Ibid.*, 16.III.07, F. Cassola, 1 ♂ 1 ♀ (FCC). *Ibid.*, 18.III.07, F. Cassola, 1 ♂ (FCC). 23.9 km N Polewali on Mamasa rd, 03°18.9S-119°22.3E, 877 m, 26.IV.05, F. Cassola, 7 ♂♂ 2 ♀♀ (FCC); D. Brzoska, 11 ♂♂ 6 ♀♀ (DBC). *Ibid.*, 28.IV.05, F. Cassola, 1 ♂ 2 ♀♀ (FCC). *Ibid.*, 16.III.07, F. Cassola, 3 ♂♂ 3 ♀♀ (FCC); D. Brzoska, 8 ♂♂ 4 ♀♀ (DBC). *Ibid.*, 18.III.07, F. Cassola, 1 ♂ 1 ♀ (FCC); D. Brzoska, 3 ♂♂ (DBC). *Ibid.*, 20.III.07, F. Cassola, 4 ♂♂ 2 ♀♀ (FCC); D. Brzoska, 6 ♂♂ 2 ♀♀ (DBC).

SULAWESI SELATAN: Bakarui Dam rd (E Polewali), km 2, 03°26.9S-119°35.3E, 650 m, 20.III.07, F. Cassola, 2 ♂♂ 1 ♀ (FCC); D. Brzoska, 3 ♂♂ 3 ♀♀ (DBC).

Specimens collected: 104.

Also a member of the *eximia*-group, this species, described from the Lore Lindu National Park (CASSOLA 1991), was found in sev-

eral sites around the Park and also in the Mamasa region (Sulawesi Barat). The yellowish elytral spots (the two middle ones often confluent with each other, forming a more or less conspicuous transverse middle band), as well as the small hook at the apex of male aedeagus and the position of the female coupling sulcus (below the epipleural line) are reliable diagnostic characters. New to Sulawesi Barat and Sulawesi Selatan.

47. *Wallacedela krikkeni* Cassola, 1991

SULAWESI TENGAH: 14 km N Kulawi on Gimpu rd (S Palu), 01°21.6S-119°58.4E, 400 m, 6.V.05, D. Brzoska, 1 ♀ (DBC). 3 km S Kulawi on Gimpu rd (S Palu), 01°27.2S-119°59.0E, 620 m, 6.V.05, F. Cassola, 1 ♂ (FCC); D. Brzoska, 1 ♂ (DBC). 11 km N Gimpu (S Palu), 01°31.8S-120°00.7E, 620 m, 5.V.05, D. Brzoska, 2 ♂♂ (DBC). 6 km N Gimpu (S Palu), 01°33.8S-120°01.4E, 530 m, 5.V.05, D. Brzoska, 1 ♀ (DBC). 5 km N Gimpu (S Palu), 01°34.0S-120°01.4E, 520 m, 5.V.05, D. Brzoska, 2 ♂♂ 1 ♀ (DBC). 6 km S Gimpu (S Palu), stream Halu (trib. of Lariang R.), 01°40.4S-120°02.9E, 400 m, 5.V.05, F. Cassola, 1 ♂ (FCC).

SULAWESI BARAT: 23.9 km N Polewali on Mamasa rd, 03°18.9S-119°22.3E, 875 m, 26.IV.05, D. Brzoska, 1 ♀ (DBC). *Ibid.*, 28.IV.05, D. Brzoska, 1 ♀ (DBC). Mambu-Tapua (NE Polewali), Tolo R., 03°15.3S-119°15.4E, 350 m, 19.III.07, F. Cassola, 1 ♂ (FCC); D. Brzoska, 3 ♂♂ (DBC).

SULAWESI SELATAN: Torajaland, 21 km W Palopo, Paredean R., 02°57.0S-120°05.6E, 575 m, 22.III.07, D. Brzoska, 4 ♂♂ 1 ♀ (DBC). Torajaland, 33 km E Rantepao on Palopo rd, 02°57.5S-120°05.0E, 845 m, 24.IV.05, D. Brzoska, 1 ♂ (DBC). Bakar Dam rd (E Polewali), km 2, 03°26.9S-119°35.3E, 650 m, 20.III.07, F. Cassola, 2 ♂♂ 2 ♀♀ (FCC); D. Brzoska, 7 ♂♂ 2 ♀♀ (DBC).

Specimens collected: 35.

Another member of the *eximia*-group, this species can easily be separated from the other closely related species because of the sharp longer sutural spine (especially evident in female), the spatulated tip of male aedeagus and the placement of the female coupling sulcus, which is a pit high on the mesepisternon. *W. krikkeni* was described from the Lore Lindu National Park, Sulawesi Tengah, as well as from the environs of Palopo in northern Sulawesi Selatan (CASSOLA 1991). Our collecting sites are quite consistent with the known distributional area of the species, however, this species was also found in the Mamasa area. Quite unexpectedly, this species was not found in 2006 when the site at 3 km S of Kulawi was visited again. But this may be another case of seasonality. New to Sulawesi Barat.

48. *Wallacedela kobayashii* Cassola, 1991

SULAWESI TENGAH: 10.7 km NW Sedoa on Wuasa-Palu rd, 01°18.3S-120°16.7E, 1410 m, 4.V.05, D. Brzoska, 1 ♂ (DBC). 14 km N Kulawi on Gimpu rd (S Palu), 01°21.4S-119°58.4E, 400 m, 6.V.05, D. Brzoska, 1 ♂ 1 ♀ (DBC). 6.5 km NW Wuasa on Palu rd, 01°22.2S-120°19.4E, 1175 m, 4.V.05, D. Brzoska, 1 ♂ (DBC).

SULAWESI BARAT: 23.9 km N Polewali on Mamasa rd, 03°18.9S-119°22.3E, 877 m, 26.IV.05, D. Brzoska, 2 ♂♂ 2 ♀♀ (DBC), 1 ♀ (FCC). *Ibid.*, 16.III.07, D. Brzoska, 1 ♀ (DBC). *Ibid.*, 20.III.07, F. Cassola, 1 ♀ (FCC); D. Brzoska, 2 ♂♂ 1 ♀ (DBC).

SULAWESI SELATAN: Torajaland, 28 km E Rantepao on Palopo rd, 02°57.3S-120°04.2E, 1120 m, 24.IV.05, D. Brzoska, 2 ♂♂ 1 ♀ (DBC), 1 ♂ (FCC). Torajaland, 33 km E Rantepao on Palopo rd, 02°57.5S-120°05.0E, 845 m, 24.IV.05, D. Brzoska, 1 ♂ (DBC).

Specimens collected: 19.

Also a member of the *eximia*-group, *W. kobayashii* is distinguished by its slender, elongate body shape, the small yellowish elytral spots (usually well apart from each other), the rufescent elytral coloration restricted to the extreme apical part (sometimes narrowly extending towards the middle along the suture and the lateral margins), the blackish outer antennomeres (5-11), the long narrow male aedeagus, and the upper position of the mesepisternal female coupling pit. New to Sulawesi Barat.

49. *Wallacedela gloriosula* (W. Horn, 1914) (fig. 32 a-d)

GORONTALO: Bakti (W Isimu), Kurakura R., 00°38.2N-122°45.9E, 80 m, 7.IV.06, F. Cassola, 11 ♂♂ 5 ♀♀ (FCC); D. Brzoska, 10 ♂♂ 5 ♀♀ (DBC). 1 km E Karya Indah, 00°37.5N-122°38.8E, 67 m, 6.IV.06, F. Cassola, 1 ♂ 2 ♀♀ (FCC); D. Brzoska, 9 ♂♂ 1 ♀ (DBC).

Specimens collected: 44.

Compared to the single female holotype specimen of this species (in DEI), our specimens appear to be identical, except for their slightly smaller body size. Head and pronotum are shiny black, with a slight violet hue and green reflections in the middle of the front transversal groove of pronotum. The elytra, in contrast, are dull black with large, roundish, yellow spots. Labrum and legs are rufescent, however sometimes more or less tinged with dark metallic. Antennomeres 1-4 are more or less rufescent (sometimes with some darker metallic hue), antennomeres 5-11 dull black. The female coupling sulcus consists of a pit high below the shoulder (however

lower than in *eximia*), followed by a marked, straight, dorso-ventral groove, close to the mesepimeron (with which it forms a nearly right angle (80-100°).

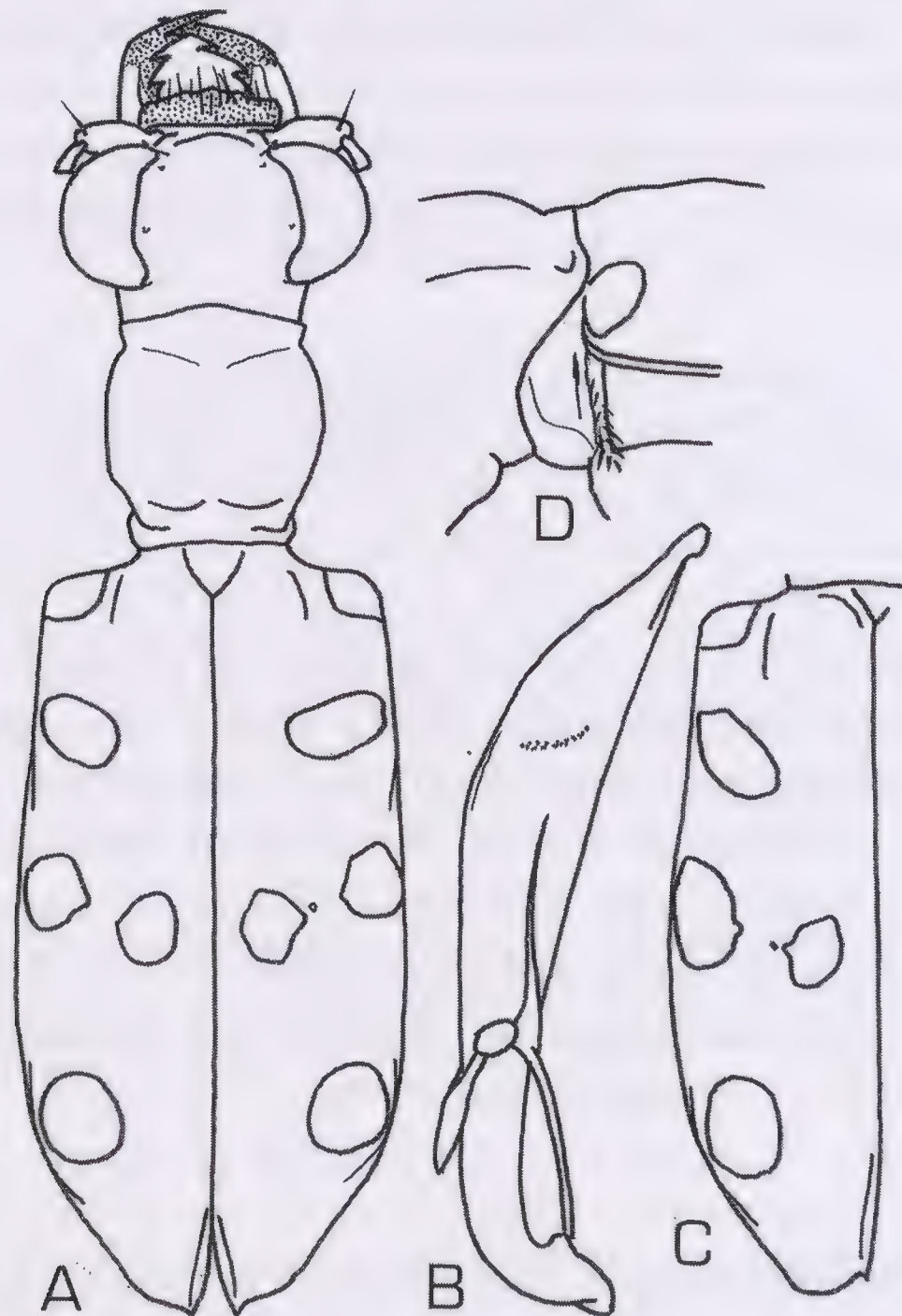


Fig. 32 - *Wallacedela gloriosula* (W. Horn, 1914), male specimen from Bakti, Gorontalo: a. habitus; b. aedeagus; female specimen from same locality: c. left elytron; d. mesepisternal coupling sulcus.

While *gloriosula* was described from Tolitoli, based on a single specimen collected by H. Fruhstorfer, it was curious to find it also over 200 km E from there in the Gorontalo province. Since the male of this species was hitherto unknown, we briefly describe it here below.

Description of male. General characters as in female. Elytral apex longer behind the subapical spot, slightly emarginate; outer margin microserrulate, sutural spine short. Aedeagus similar to that of *eximia* but narrower, tapered, with an elongated, ventrally

slightly hooked, apex. Inner sac typical of genus *Wallacedela* (CASSOLA 1991).

50. *Wallacedela nishiyamai* Cassola, 1991

SULAWESI TENGAH: 12 km N Kulawi on Gimpu rd (S Palu), 01°21.4S-119°58.4E, 400 m, 6.V.05, F. Cassola, 5 ♂♂ 1 ♀ (FCC); D. Brzoska, 6 ♂♂ 4 ♀♀ (DBC). 3 km S Kulawi on Gimpu rd (S Palu), 01°27.2S-119°59.0E, 620 m, 15.IV.06, F. Cassola, 3 ♂♂ 1 ♀ (FCC).

Specimens collected: 20.

Also of the *eximia*-group, *W. nishiyamai* can be mistaken in the field with the sometimes syntopically co-occurring but obviously slightly larger *Thopectica sawadai*. However, the shape and inner sac of male aedeagus (characteristic of a *Wallacedela* species) and the presence of an obvious coupling sulcus in females easily help to separate *nishiyamai* from *sawadai*. Unlike most type specimens, our *nishiyamai* specimens have more or less extended rufescent elytral apices. In 2006, in the same site at 12 km N Kulawi, *nishiyamai* was not found but *Thopectica sawadai* were abundant (seasonality).

51. *Wallacedela paulina* n. sp. (fig. 33 a-d)

D i a g n o s i s . This species differs from the closely allied *W. nishiyamai* because of the slightly larger size, the practically missing elytral mirror in female, the similarly shaped but weaker and lower positioned coupling mesepisternal sulci of females, and the strong cupric reflections of pronotum (especially on front and hind lobes). Male aedeagus is elongated, slightly inflated in the outer third, slightly arched, with a short small hook on the ventral side.

D e s c r i p t i o n . Head shiny bronze-black with green reflections in the middle of clypeus and on the sides of vertex, and stronger cupric reflections on sides of clypeus, antennal plates, sides of frons, orbital declivities and behind the eyes, as well as on genae; glabrous, just two fine sensorial setae or setigerous punctures on fixed loci near both eyes. Clypeus almost smooth, very fine concentric striae on frons, declivities of eyes and vertex very finely striated longitudinally, the striations becoming oblique behind the eyes and waved on neck. Labrum testaceous, transverse, much wider than long, feebly tridentate in the middle, with 10-12 hairs near for-

ward edge and 1-2 additional ones in the middle of disc. Mandibles testaceous basally, rufescent apically, blackened on teeth contours. Mouth parts testaceous, with the last joints of palpi slightly metallic dark on the tip. Antennae as long as approximately the basal third of the elytral length, slightly shorter in female; scape and articles 2-4 of the antennae rufescent, one single erect seta on tip of scape; articles 5-11 dull rufescent-brown, finely and evenly pubescent, the last 2-4 antennomeres more or less frankly black.

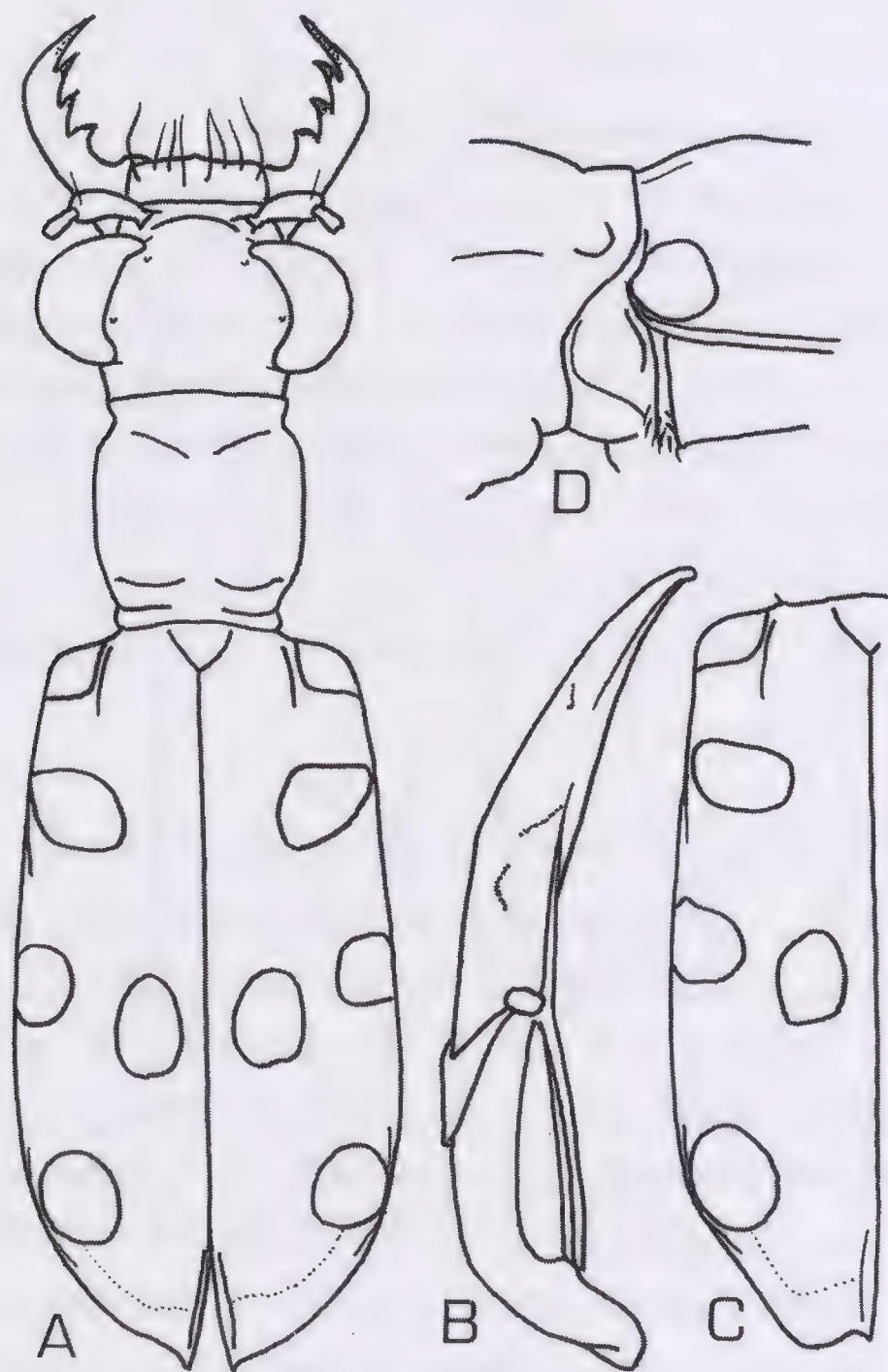


Fig. 33 - *Wallacedela paulina* n. sp., male paratype: a. habitus; b. aedeagus; female paratype: c. left elytron; d. mesepisternal coupling sulcus.

Thorax: pronotum approximately as long as wide, rounded and globose on disc, with the lateral sides slightly convergent in front, smooth, glabrous, shiny black with green reflections on disc and strong cupric reflections on fore and hind lobes, the hind tubercles and on front sides of middle lobe; hind tubercles small. Epipleu-

ral rim effaced, poorly visible; proepisterna shiny black, with a few white erect hairs near forward edge, the other sternal pieces also black with some greenish and cupric reflections, some white recumbent pubescence on the ventral side of mesepimera, on coxae, the lateral sides of sternum, and on the hind corner of metepisterna; female mesepisternal coupling sulcus a rounded, shallow dorso-ventral groove, slightly bent in the middle, well below the epipleural line.

Elytra wider than head across eyes, with well-marked, rounded shoulders; sutural spine very small in both sexes, elytral apex a bit pointed in male, slightly emarginate in female. Colour wholly dull black, usually with rufescent apical lunule; female elytral "mirror" practically missing, consisting of slightly noticeable, fine elytral punctures. Elytral markings consisting of the usual five whitish to yellowish separated rounded spots: humeral (slightly polished and shiny), subhumeral (oval and oblique, slightly pointing to the humeral dot), middle lateral, flanked on disc by the discal spot (slightly coalescing with each other in a few specimens), and subapical (sometimes narrowly connected along the border with the rufescent apical lunule). Epipleura narrow, testaceous-rufescent.

Underside black with some green and cupric reflections, abdominal sternites 5-7 and sides of 4th rufescent, the latter one blackened in the middle, the other visible sternites also black; some short, white recumbent pubescence on 3rd and 4th abdominal sternites. Front and middle coxae, apex of hind coxae, trochanters and legs rufescent; tips of "knees" briefly blackened; a few rows of white curled hairs on femora, many spiniform hairs on tibiae and tarsi, more numerous on the distal half of median tarsi (toilet tool).

Aedeagus elongate, slightly inflated in the outer third, slightly arched, with a short small hook on the ventral side; inner sac of aedeagus typical of the genus *Wallacedela*, devoid of any flagellum.

Length: 12-13.5 mm (without labrum).

Holotype, ♂, and 39 paratypes (25 ♂♂ 14 ♀♀) from SULAWESI TENGAH: 35 km NW Mapane, Tambarana on Tinombo-Poso road, 01°13.7S-120°33.5E, 28 m, 10.IV.06, F. Cassola, 4 ♂♂ 3 ♀♀; D. Brzoska, 22 ♂♂ 11 ♀♀. Ten additional paratypes from a different locality of the same province: 12 km SW Mapane on Watutau road, 01°31.2S-120°37.9E, 295 m, 13.IV.06, F. Cassola, 1 ♂; D. Brzoska,

8 ♂♂ 1 ♀. Holotype deposited in the Museo Civico di Storia Naturale "G. Doria", Genova, Italy (MSNG); paratypes in authors' collections (FCC, DBC). Specimens collected: 50.

E t y m o l o g y . This new *Wallacedela* species is dedicated to first author's wife, Paola Pasqualini Cassola, who patiently supported in many ways her husband's lifelong study of tiger beetles (sometimes actively cooperating in field collecting) and helped him go three times to Sulawesi to accomplish this study.

R e m a r k s . This species, obviously belonging to the *eximia* group, strongly resembles especially *W. nishiyamai*, however differing from it because of the slightly larger size, very weak elytral mirror in females, the similarly shaped but less marked and lower positioned coupling mesepisternal sulci of females, as well as by the strong cupric reflections of the pronotum (especially in front and hind lobes). From *W. judithae* it can be told apart because of the rufescent apical lunule and the different aedeagus and coupling sulci.

52. *Wallacedela posoana* n. sp. (fig. 34 a-d)

D i a g n o s i s . A rather small *Wallacedela* species belonging to the *eximia*-group, apparently allied to *W. banggai* and *W. nishiyamai*, however with stronger bluish-green reflections on head and especially on pronotum. Labrum testaceous, elytra dull black with the regular yellowish spots. Legs metallic black in most specimens, sometimes more or less rufescent (probably depending on age). Female mesepisternal coupling sulcus a poorly marked, dorso-ventral, slightly bent groove with a shallow puncture in the middle.

D e s c r i p t i o n . Head shining bronze-black, with blue-violet reflections on sides of clypeus, front part of frons, antennal plates and on genae, and some greenish metallic reflections on sides of vertex and near the eyes; glabrous, just two fine sensorial setae or setigerous punctures on fixed loci near both eyes. Clypeus and frons almost smooth, declivities of eyes and sides of vertex very finely striated longitudinally, the striations becoming a bit waved and oblique behind on neck. Labrum testaceous, transverse, much wider than long, feebly tridentate in the middle, with 12 hairs near forward edge and 2-3 additional ones in the middle of disc. Man-

dibles testaceous, blackened on apical and inner teeth. Mouth parts testaceous, with the last joints of palpi more or less metallic dark. Antennae long, nearly reaching the midpoint of the elytra in male, slightly shorter in female; scape and 2nd article of antennae metallic violet-black, one single erect seta on tip of scape; articles 3-4 bare, bluish-green in basal half, metallic violaceous apically, with 2-3 short spiniform setae; antennomeres 5-11 dull black, finely and evenly pubescent.

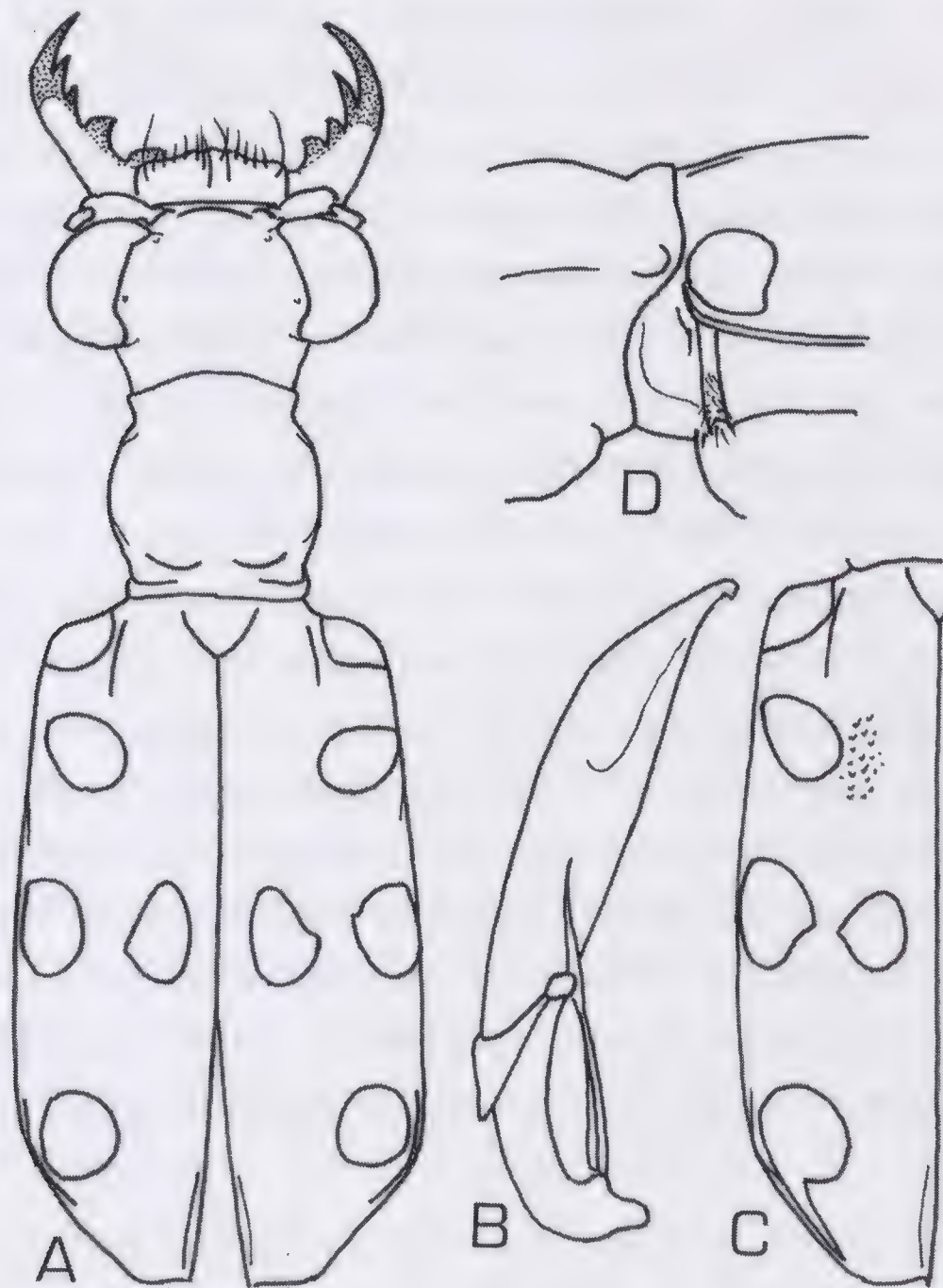


Fig. 34 - *Wallacedela posoana* n. sp., male paratype: a. habitus; b. aedeagus; female paratype: c. left elytron; d. mesepisternal coupling sulcus.

Thorax: pronotum approximately as long as wide, rounded at sides, globose on disc, smooth, glabrous, shining black with some slight green to cupreous reflections on disc and on margins of fore and hind lobes, more deeply bluish-violet on transverse constrictions; hind tubercles small. Epipleural rim effaced, poorly visible; episterna shining black, with some green to violet reflections and

some tuft of white decumbent hairs on their ventral sides, on coxae, on the lateral sides of sternum, and on the hind corner of metepisterna; female mesepisternal coupling sulcus a marked dorso-ventral groove, slightly bent above the middle, where there is a shallow pit.

Elytra wider than head across eyes, with well-marked, rounded shoulders; sutural spine very small in both sexes, elytral apex slightly pointed in male, slightly retracted in female. Colour wholly dull black with no rufescent parts; with some green to violet reflections near the apex; female elytral “mirror” an ill-defined, oval-shaped, shagreened, slightly depressed, shining bluish-black area between the subhumeral spot and the suture. Elytral markings comprising the usual five yellowish rounded spots: humeral, subhumeral (slightly transverse, sometimes narrowly connected with the humeral one laterally), lateral middle, discal (sometimes slightly tending toward the direction of the lateral spot), and subapical (large, roundish, sometimes prolonged toward the apex along the apical border as a rufescent stripe). Epipleura more or less metallic.

Underside bluish-black with some cupreous reflections; glabrous except for a short whitish pubescent in the middle of 3rd and 4th visible sternites; abdominal sternites mostly metallic, except sometimes the last two and the sides of the preceding ones more or less rufescent (probably depending on age). Coxae metallic bluish black, with white pubescence at sides; trochanters rufescent; femora, tibiae and tarsi more or less metallic black in most specimens, with a few rows of white spiniform hairs. Some specimens have the legs more or less testaceous-rufescent instead of metallic (probably also depending on age).

Aedeagus straight, elongate, arched, slightly inflated in the outer third, with a short small hook apically on the ventral side; inner sac of aedeagus typical of the genus *Wallacedela*, devoid of any flagellum.

Length: 10.5-12 mm (without labrum).

Holotype, ♂, and 96 paratypes (64 ♂♂ 32 ♀♀) from SULAWESI TENGAH: 5.2 km N Pandiri on Poso road, 20 m, half-dry creek at 01°28.2S-120°48.0 E, 2.V.05, F. Cassola, 9 ♂♂ 2 ♀♀; D. Brzoska, 10 ♂♂ 8 ♀♀. *Ibid.*, 11.IV.06, F. Cassola, 13 ♂♂ 6 ♀♀; D. Brzoska, 32 ♂♂ 16 ♀♀. Further 37 paratype specimens from a different locality on the W side of Lake Poso: Tonusu road, 6 km S Bada road

ject., 01°47.9S-120°31.8E, 525 m, 1.V.05, D. Brzoska, 1 ♂; *ibid.*, 11.IV.06, F. Cassola, 6 ♂♂ 2 ♀♀, D. Brzoska, 17 ♂♂ 11 ♀♀. Three more specimens, non-type, from a third locality SW of the first site [km 12.9 S Mapane on Watutau road, 01°31.1S-120°37.8E, 295 m, 13.IV.06, F. Cassola, 1 ♂ 2 ♀♀ (FCC)], which remarkably differ by the slightly larger size and the rufescent legs and antennomeres 1-4, are here also considered to be this species but are not included in the type series. Holotype deposited in the Museo Civico di Storia Naturale "G. Doria", Genova, Italy (MSNG); paratypes in authors' collections (FCC, DBC). Specimens collected: 136.

E t y m o l o g y . The name of this additional new *Wallacedela* species recalls the placement of the above localities, both of which are fairly close to Lake Poso, the type locality being a half-dry gully near Pandiri on the road to Poso and the second locality being just near to the W coast of Lake Poso, in Central Sulawesi.

R e m a r k s . This new species was found along a half-dry sandy creek bed, some 3-4 metres deep and 2-4 metres wide, running through a fairly crowded agricultural area with some remnants of the natural vegetation at sides (fig. 5). The new species strongly resembles *W. banggai* (Cassola, 1991), described from the Luwuk area in the eastern peninsula, which, however, is slightly smaller in size, has basically roseate bronze instead of bluish-green reflections on head and pronotum, and has more obviously marked female coupling sulci. The new species is also somewhat reminiscent of *W. nishiyamai*, which differs by having testaceous legs and appendages, slightly longer, bronzed cupreous to violet, pronotum, and different, deeper female coupling sulci (CASSOLA 1991).

53. *Wallacedela brendelli* Cassola, 1991

SULAWESI TENGAH: 10.7 km NW Sedoa on Wuasa-Palu rd, 01°18.3S-120°16.7E, 1410 m, 4.V.05, F. Cassola, 1 ♀ (FCC); D. Brzoska, 1 ♂ 1 ♀ (DBC). *Ibid.*, 14.IV.06, F. Cassola, 1 ♂; D. Brzoska, 3 ♂♂ (DBC). 6.5 km NW Wuasa on Palu rd, 01°22.2S-120°19.4E, 1175 m, 4.V.05, D. Brzoska, 1 ♂ 1 ♀ (DBC).

Specimens collected: 9.

This species was described based on only three female specimens from the Lore Lindu National Park in Central Sulawesi, and due to lack of a male specimen its attribution to the genus *Wallacedela* was at first tentative (CASSOLA 1991). However, this attribution

was later confirmed (CASSOLA 1996), thanks to some male specimens from Palolo, Palu. MATALIN (1998) also recorded this species from northern Sulawesi Selatan (Puncak Palopo), and in addition a female non-type specimen was recorded from Sulawesi Tenggara (Gunung Watuwila, NE Kolaka) (CASSOLA 1991).

54. *Wallacedela haffendeni* n. sp. (fig. 35 a-d)

D i a g n o s i s . A *Wallacedela* of the *eximia* group, somewhat intermediate between this and the *tambusisii* group because of the variable colour of the appendages. Head and pronotum shiny violet-black. Elytra dull black with separate yellow spots, female elytral mirror almost lacking, female coupling sulcus a marked dorso-ventral groove, especially deep under the shoulder at the epipleuron level. Labrum, abdominal sternites, legs and appendages metallic violet-black to rufescent (this variation in colour of various structures may be due to the different ages of the specimens).

D e s c r i p t i o n . Head shiny violet-black, with bluish-green reflections on sides of clypeus, on sides of vertex, antennal plates and in front part of genae; glabrous, just two fine sensorial setae or setigerous punctures on fixed loci near both eyes. Clypeus and frons almost smooth, declivities of eyes and sides of vertex finely striated longitudinally, the striations becoming oblique and waved behind on neck. Labrum metallic violet, transverse, much wider than long, often partly rufescent, feebly tridentate in the middle, with 9-11 hairs near forward edge and 1-2 additional ones in the middle of disc. Mandibles testaceous basally, rufescent to shiny black (with some green reflections) in front part and on teeth. Mouth parts rufescent to metallic dark. Antennae slender, as long as nearly to the front third of the elytral length in male, slightly shorter in female; antennomeres 1-4 rufescent to bluish-black, scape and articles 2-4 almost bare, one single erect seta on tip of scape; antennomeres 5-11 dull brown to black (sometimes the base of 5th antennomere also narrowly rufescent), finely and evenly pubescent.

Thorax: pronotum very slightly longer than wide, moderately globose on disc, rounded at sides, sub-parallel sided, smooth, glabrous, shiny black with some slight green reflections on the front margin of the fore lobe, sometimes also on the hind lobe; hind

tubercles small. Epipleural rim effaced, episterna shiny black, glabrous, sometimes with a few white hairs near the front margin of proepisterna, the ventral side of mesoepimera, on coxae, on the lateral sides of sternum, and on the hind corner of metepisterna; female coupling sulcus a marked dorso-ventral groove, especially deep under the shoulder at the epipleuron level.

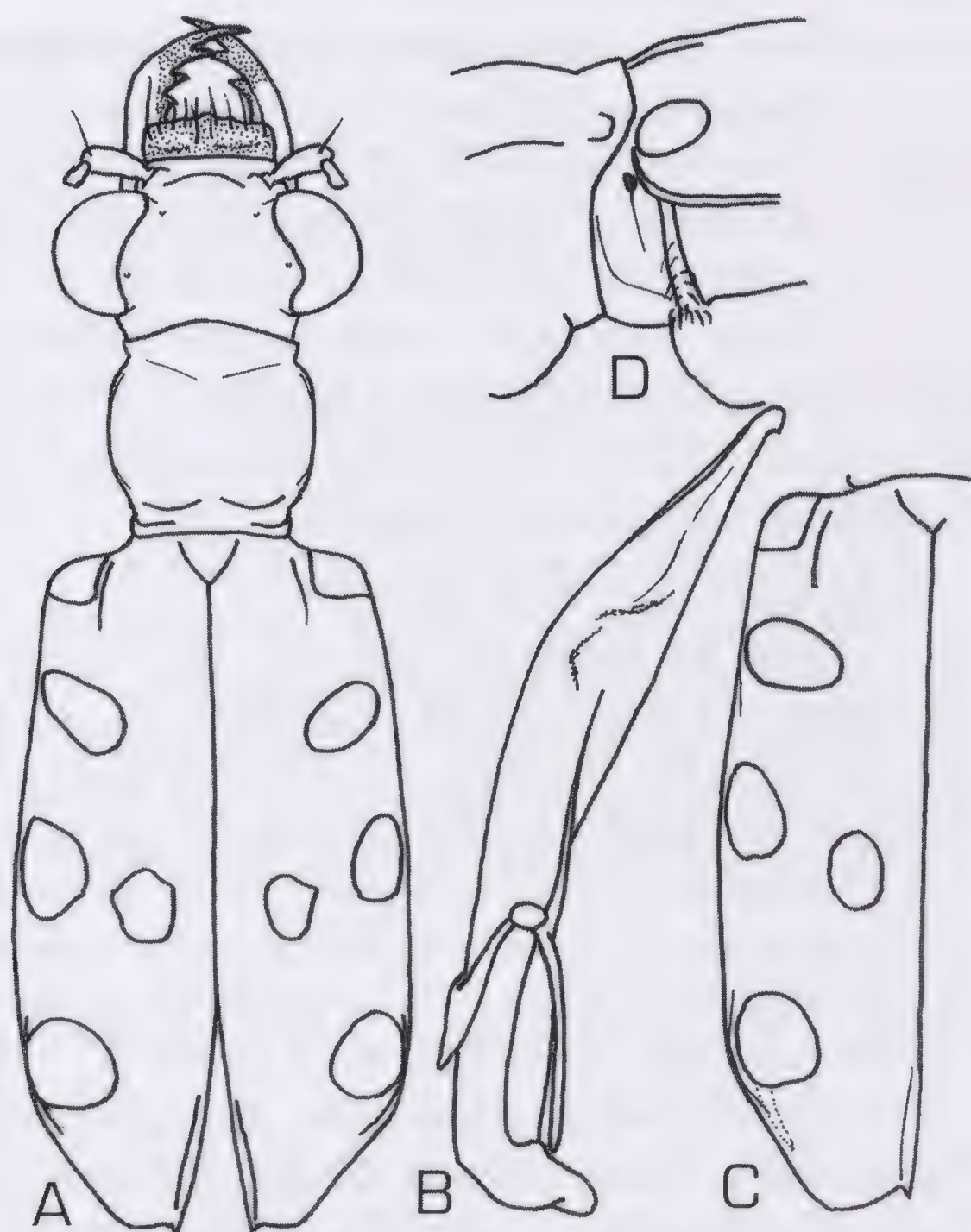


Fig. 35 - *Wallacedela haffendeni* n. sp., male paratype: a. habitus; b. aedeagus; female paratype: c. left elytron; d. mesepisternal coupling sulcus.

Elytra wider than head across eyes, with well-marked, rounded shoulders; sutural spine present but very small in both sexes; elytral apex pointed in male, slightly emarginate in female, briefly metallic bluish-green in both sexes. Colour wholly dull black with no rufescent parts; female elytral "mirror" lacking, with sometimes just minimal, poorly visible remnants of a shagreened non-shining area

between the subhumeral spot and the suture. Elytral markings comprising five yellowish to yellow, rounded, separate spots: humeral (slightly polished and shiny), subhumeral (larger, oblique, almost transverse), submarginal, discal (roundish to subtriangular, sometimes slightly pointing at the submarginal one), and subapical (large, round, sometimes extended as a short lineole towards the suture). Epipleura narrow, rufescent to metallic dark.

Underside more or less shiny black, the last abdominal sternites 7-4 more or less rufescent, fully glabrous with just two sensorial setae near the middle of the hind margins of 3rd and 4th sternites. Coxae, trochanters and legs metallic black, sometimes more or less rufescent; almost bare, a few rows of curled or spiniform hairs especially on front femora and the distal half of the middle tibiae (toilet tool).

Aedeagus narrow, poorly arched and tapered, with a long straight apex, slightly hooked ventrally; inner sac of aedeagus typical of the genus *Wallacedela*, devoid of any flagellum.

Length: 11-12.2 mm (without labrum).

Holotype, ♂, and 31 paratypes (19 ♂♂, 12 ♀♀) from GORONTALO: E of Gorontalo, Tutulo, 00°30.9N-123°14.4E, 75 m, 6.IV.06, F. Cassola, 8 ♂♂ 2 ♀♀; D. Brzoska, 12 ♂♂ 10 ♀♀. Nine additional paratypes (5 ♂♂, 4 ♀♀) from another locality of the same province: E of Gorontalo, Lampotoo, 00°31.1N-123°12.2E, 20 m, 6.IV.06, F. Cassola, 1 ♂; D. Brzoska, 4 ♂♂ 4 ♀♀. Three further paratypes from a third locality in SULAWESI UTARA: N of Manado, 4 km N Mapolo, Owasan R., 00°59.8N-124°31.4E, 285 m, 2.IV.06, F. Cassola, 1 ♀; D. Brzoska, 2 ♂♂. One non-type specimen, ♂, also from SULAWESI UTARA: Molibagu road, 10.2 km N Molibagu, 00°27.1N-123°58.1E, 215 m, 4.IV.06, D. Brzoska, 1 ♂ (DBC). Holotype deposited in the Museo Civico di Storia Naturale "G. Doria", Genova, Italy (MSNG); paratypes in authors' collections (FCC, DBC). Specimens collected: 45.

E t y m o l o g y . This new *Wallacedela* species is cordially dedicated to Andrew Haffenden (Nature Travel Specialists, Southeast Asian Natural Adventures, Helena, Alabama, USA), an Aussie who knows this part of the world very well and set up all our local arrangements.

R e m a r k s . This new species, obviously another member of the *eximia* group, seems to be somewhat intermediate between this

and the *tambusisii* groups. It can also be somewhat reminiscent of *W. paulina*, which, however, differs by the strong cupric reflections of pronotum, the frankly rufescent legs and appendages, the rufescent apical lunula of the elytra and the differently shaped and positioned female coupling sulci.

55. *Wallacedela storki* Cassola, 1991

SULAWESI UTARA: Dumoga Bone NP, London R. (trib. of Tumpah R.), 00°34.6N-123°54.0E, 230 m, 3-4.IV.06, F. Cassola, 5 ♂♂ (FCC); D. Brzoska, 8 ♂♂ 4 ♀♀ (DBC). 1.5 km N Matayangan on Molibagu rd, 00°28.5N-123°58.3E, 225 m, 4.IV.06, D. Brzoska, 1 ♂ (DBC).

Specimens collected: 18.

This species, belonging to the *tambusisii* group (CASSOLA 1991), was described from the Tumpah R. banks in the Dumoga-Bone National Park (CASSOLA 1991). We found it in the London R., a tributary of Tumpah R.. It is well characterised by the black body colour (head and pronotum shiny, elytra dull), the black labrum (with green reflections and an obvious carina in front), the black appendages, the lack of female elytral mirror, and the female coupling sulcus consisting in a small pit in the extreme upper corner of mesepisternum. One specimen was also found outside the Park in the Molibagu rd.

56. *Wallacedela sabiri* n. sp. (fig. 36 a-d)

D i a g n o s i s . A *Wallacedela* of the *tambusisii* group, with labrum, legs and appendages metallic black. Elytra dull black, with no female elytral mirror. Elytral apex distinctly emarginated in female, with a short but rather strong sutural spine; right-angled, even very slightly emarginated in male, with almost no sutural spine. Female mesepisternal coupling sulcus a deep pit under the shoulder at the epipleuron level. Male aedeagus elongate, straight, poorly enlarged apically, ventrally bent at apex, button-ended, the button being a small ventral hook.

D e s c r i p t i o n . Head violet black, with green reflections on sides of clypeus, the orbital plates, the front sides of vertex, behind the eyes and on genae; glabrous, just two fine sensorial setae or setigerous punctures on fixed loci near both eyes. Clypeus smooth,

frons very finely striated concentrically, vertex and orbital declivities with longitudinal fine striae which become oblique and a bit waved behind on neck. Labrum transverse, much wider than long, violet black metallic with strong green reflections; feebly tridentate in the middle, with 11-12 hairs near forward edge and 2-3 additional ones in the middle of disc. Mandibles testaceous basally (up to the level of the second inner tooth), then black in front and on teeth, with some greenish reflections and with a rufescent hue on teeth. Palpi discolourous, the labial ones testaceous with the last joint metallic black, maxillary palpi more or less metallic dark. Antennae as long as approximately to the fore third of the elytral length in male, slightly shorter in female; scape and antennomeres 2-4 metallic violet-black with greenish reflections, glabrous, one single erect seta on tip of scape; antennomeres 5-11 dull black, finely and evenly pubescent.

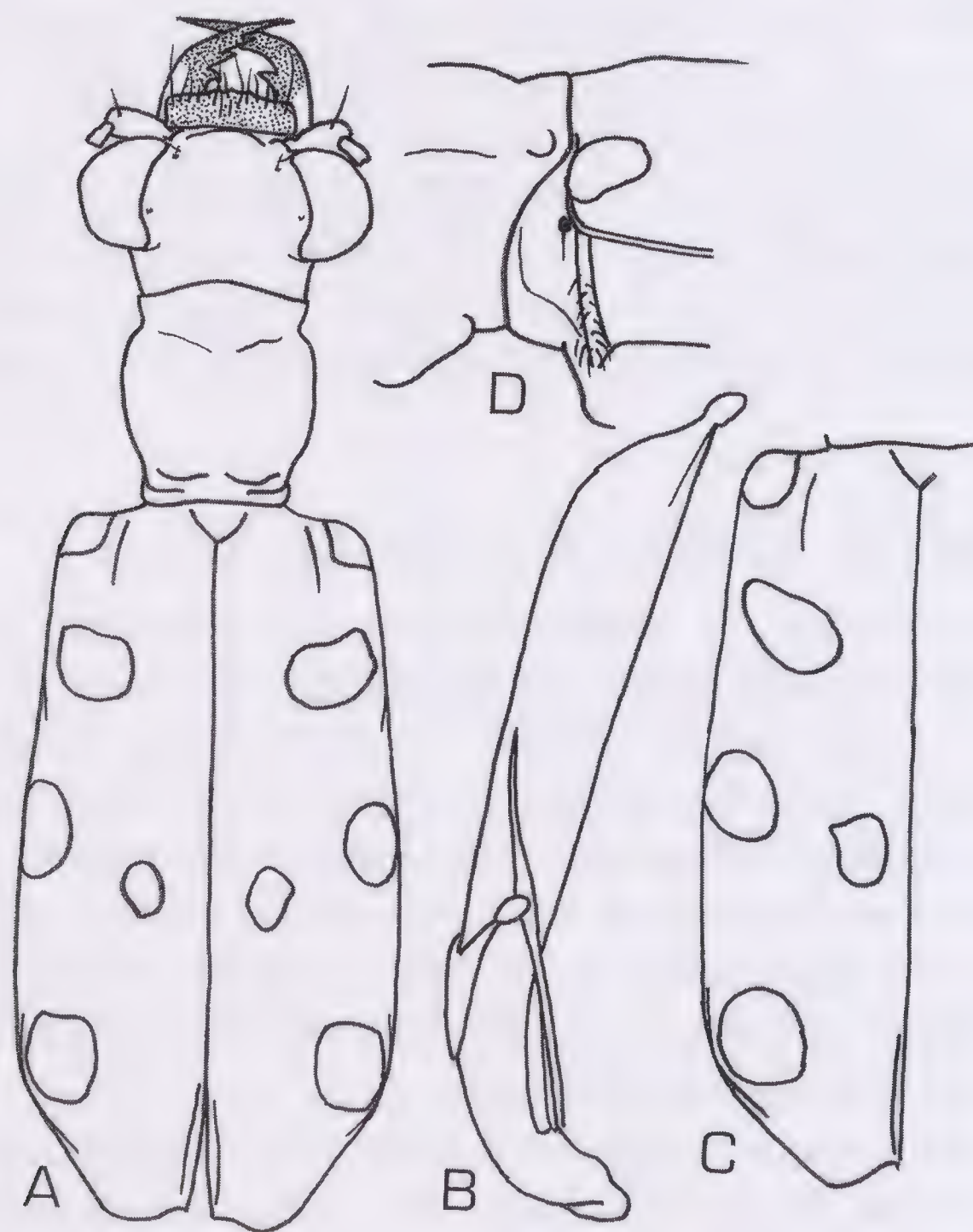


Fig. 36 - *Wallacedela sabiri* n. sp., male paratype: a. habitus; b. aedeagus; female paratype: c. left elytron; d. mesepisternal coupling sulcus.

Thorax: pronotum approximately as long as wide, or slightly longer than wide, parallel-sided, slightly rounded at sides, smooth, glabrous, shiny black with green reflections on sides of disc and on fore and hind lobes; hind tubercles small. Epipleural rim effaced, poorly visible; episterna shiny black; some white pubescence on their ventral half, on lateral sides of sternum, and on the hind corner of metepisterna. Female mesepisternal coupling sulcus a deep pit under the shoulder at the epipleuron level, much lower than in *W. storki* but distinctly higher than in *W. kalisi*, followed by a slight, dorso-ventral, rounded groove.

Elytra dull black, wider than head across eyes, with well-marked shoulders; elytral apex distinctly emarginated in female, with a short but rather sharp sutural spine, right-angled in male, even very slightly emarginated, with almost no sutural spine; female elytral mirror lacking. Colour dull black with some green to cupric reflections near the apex; no female elytral mirror. Elytral markings comprising the usual five yellowish rounded, separate spots: humeral spot (polished, more yellow), subhumeral (larger, oval-shaped, more transverse, a bit pointing laterally towards the humeral spot), submarginal (large, subtriangular internally), discal (small, roundish, slightly behind the submarginal spot and between this and the suture), and subapical (large, roundish). Epipleura narrow, briefly subrufescent to metallic dark.

Underside and abdominal sternites black, the last sternite a bit rufescent apically; glabrous except for a short white recumbent pubescent on sternites 3-5. Coxae metallic black to green, with white recumbent hairs; trochanters dark rufous to pitchy black; legs metallic black with green reflections especially on basal half of femora, with a few rows of white spiniform hairs.

Male aedeagus elongate, almost straight, poorly enlarged apically, ventrally bent at apex, button-ended, the button being a small ventral hook; inner sac of aedeagus typical of the genus *Wallacedela*, devoid of any flagellum.

Length: 12.5-14 mm (without labrum).

Holotype, ♂, and 5 paratypes (2 ♂♂, 3 ♀♀) from SULAWESI TENGAH: NW side of Lake Poso, 10.4 km W Tonusu on Bada road, 01°47.8S-120°29.6E, 1125 m, 12.IV.06, F. Cassola, 2 ♂♂; D. Brzoska, 1 ♂ 3 ♀♀. Two more paratypes (♂♀) from two nearby

localities of the very same area: 7.2 km W Tonusu on Bada road, 01°47.5S-120°30.2E, 955 m, 12.IV.06, D. Brzoska, 1 ♂; 6.9 km W Tonusu on Bada road, 01°47.3S-120°30.1E, 1200 m, 12.IV.06, F. Cassola, 1 ♀. Holotype deposited in the Museo Civico di Storia Naturale "G. Doria", Genova, Italy (MSNG); paratypes in authors' collections (FCC, DBC). Specimens collected: 8.

E t y m o l o g y . This new *Wallacedela* species is cordially dedicated to Sabir Dolo (Makassar, Sulawesi), who was our clever and co-operative driver during our trips.

R e m a r k s . This interesting new species was found in Central Sulawesi, in the same area as fourteen other tiger beetle species (see below). Females somewhat resemble *Th. toraja*, but the occurrence of coupling sulci and other characters easily help to separate them from it. It is also very similar to *W. tambusisii* (unfortunately known from the holotype male only), but the elytral markings and the differently shaped aedeagus clearly indicate that *W. sabiri* is a different species.

57. *Wallacedela basidonno* n. sp. (fig. 37 a-d)

D i a g n o s i s . A *Wallacedela* of the *tambusisii* group, similar to *storki* and *gloriosula*, but with labrum, antennomeres 1-4, abdominal sternites (except the last two), legs and appendages metallic black with sometimes some slight green reflections; elytra dull black with yellowish separate spots; aedeagus narrow, almost straight, button-ended, with a very small apical hook ventrally. No female elytral mirror; female coupling sulcus a marked dorso-ventral deep groove, much deeper below the shoulder. No female elytral mirror; female coupling sulcus a shallow sinuated groove, deeper below the shoulder. One female specimen differs from the others because it has the labrum, antennomeres 1-4, tibiae and tarsi, as well as the elytral apex partially rufescent.

D e s c r i p t i o n . Head shiny black, with slight green to cupric reflections on the lateral sides of clypeus and briefly on front sides of vertex; glabrous, just two fine sensorial setae or setigerous punctures on fixed loci near both eyes. Clypeus and frons almost smooth, vertex and orbital declivities with fine longitudinal striae, the striations becoming oblique and waved behind on neck. Labrum violet to cupric metallic, with some green areas near the base and on front

edge; much wider than long, feebly tridentate in the middle, with 9-11 hairs or setigerous punctures near forward edge and 1-2 additional ones in the middle of disc. Mandibles testaceous basally, blackened in front and on teeth. Palpi testaceous to rufescent, with the last joints more or less metallic green. Antennae reaching the first quarter of the elytral length in male, slightly shorter in female; scape and 2th article of antennae metallic violet with green and cupric reflections, one single erect seta on tip of scape; articles 3-4 bare, mostly metallic violet; antennomeres 5-11 dull black, finely and evenly pubescent.

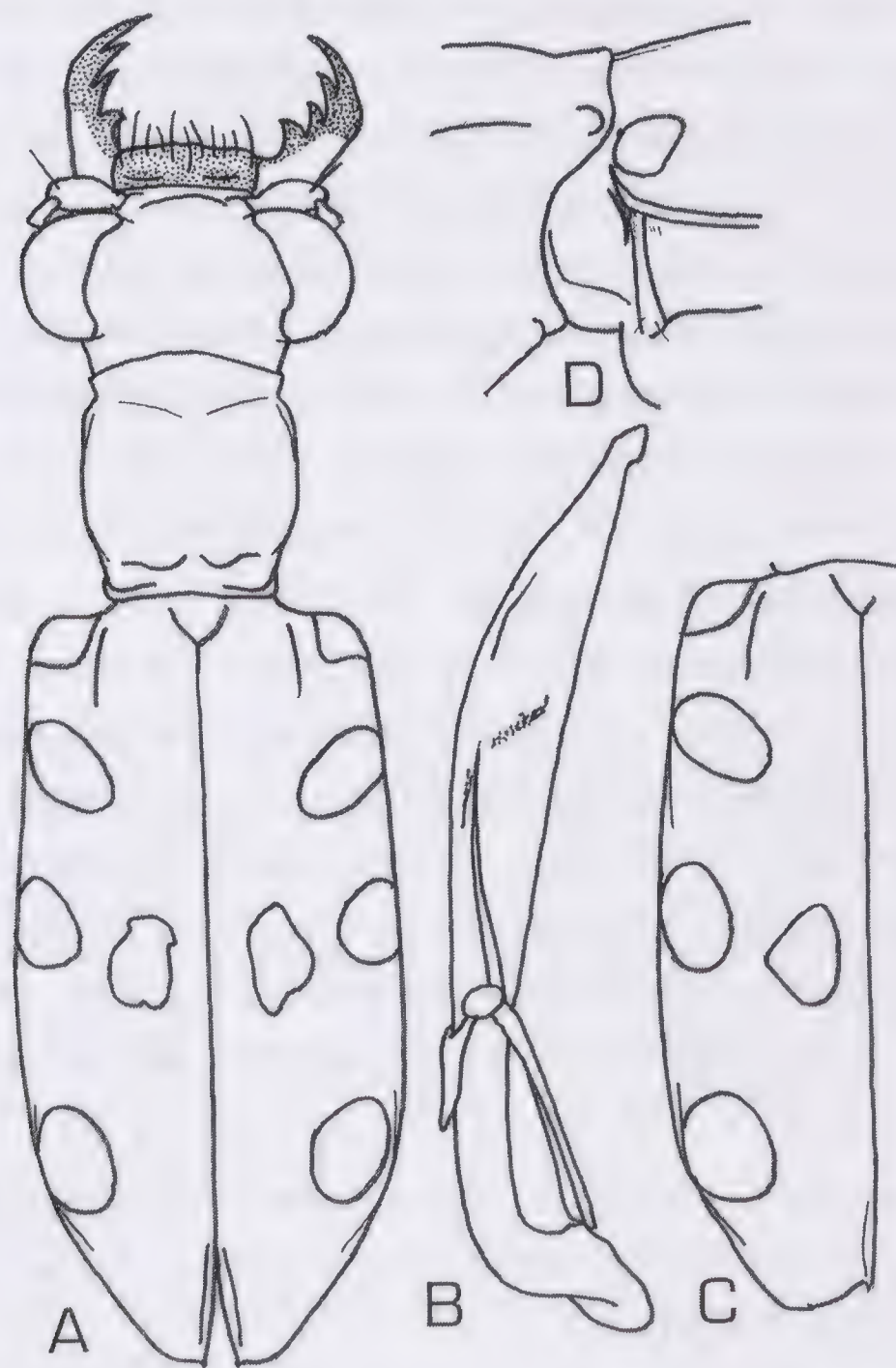


Fig. 37 - *Wallacedela basidondo* n. sp., male paratype: a. habitus; b. aedeagus; female paratype: c. left elytron; d. mesepisternal coupling sulcus.

Thorax: pronotum slightly longer than wide, moderately globose above, subparallel-sided, smooth, fully glabrous, shiny black with cupric to greenish reflections on the front and hind lobes and sometimes on disc; hind tubercles small. Epipleural rim effaced,

not visible; episterna shiny black, with some green to violet reflections and just a few white hairs on the front margin of proepisterna, mesepimera, coxae, the lateral sides of sternum, and the hind corner of metepisterna; female coupling sulcus a marked dorso-ventral deep groove, much deeper below the shoulder.

Elytra wider than head across eyes, with well-marked, rounded shoulders; apex elongate and acute in male, slightly emarginate in female, with a very small sutural spine in both sexes. Colour wholly dull black with some metallic green briefly at the apex, no rufescent parts in all the type specimens; female elytral mirror almost lacking. Elytral markings consisting of five, yellowish to yellow, separate, rounded spots: humeral (usually slightly polished), subhumeral (large, oblique to transverse), submarginal (roundish to subtriangular in shape), discal (slightly behind the submarginal one between it and the suture), and subapical (large, roundish). One female non-type specimen from the type locality has the labrum, the antennae, the apex of elytra and most abdominal sternites more or less rufescent. Epi-pleura narrow, metallic black, briefly here and there slight rufescent.

Underside almost glabrous as in *storki*, just a few hairs on the rear part of metepisternon and on the sides of hind coxae; abdominal sternites pitchy black except for the last two segments which are more or less rufescent, glabrous with just two sensorial setae near the hind margins of 3rd, 4th and 5th sternites. Coxae shiny black with some cupric reflections, with white recumbent pubescence; trochanters rufescent; femora, tibiae and tarsi violet-black, with a few rows of white curled or spiniform hairs, especially dense on the outer half of tibiae (toilet tool).

Aedeagus narrow, elongate, poorly arched, almost straight, with a very small hook ventrally; inner sac typical of the genus *Wallacedela*, devoid of any flagellum.

Length: 12-13.2 mm (without labrum).

Holotype, ♂, and 10 paratypes from SULAWESI TENGAH: SW of Tolitoli, 5.8 km S of "km 4-Basidondo", 00°42.5N-120°37.5E, 136 m, 9.IV.06, F. Cassola, 1 ♂ 1 ♀; D. Brzoska, 6 ♂♂ 3 ♀♀. One additional paratype, ♀, from the same area: 2.5 km S of "km 4-Basidondo", 00°43.3N-120°37.0E, 100 m, 9.IV.06, D. Brzoska, 1 ♀. One non-type specimen, ♀, with same label data as the holotype and having partly rufescent labrum, antennae and elytral apex, in

DBC. Holotype deposited in the Museo Civico di Storia Naturale "G. Doria", Genova, Italy (MSNG); paratypes in authors' collections (FCC, DBC). Specimens collected: 13.

E t y m o l o g y . The name of this new *Wallacedela* species comes from the locality ("Basidondo") where it was found.

R e m a r k s . This new species was found along the road going from the Tolitoli coastal area south to the Tomini Bay, where we rather expected to find *W. gloriosula* (which, instead, was found in the Gorontalo province). *W. basidondo* is obviously a closer relative of *W. storki* (known from the Dumoga-Bone National Park area), and it may be considered, because of the metallic labrum, legs and appendages, a member of the *tambusisii* group (CASSOLA 1991). However, one female non-type specimen at least exhibits partially rufescent labrum, elytral apex, legs and antennae, thus showing that some individuals (possibly depending on age) may well have rufescent body parts. From *W. sabiri* it differs because of the longer elytra, the different and narrower aedeagus and the differently shaped coupling sulci.

58. *Wallacedela kalisi* Cassola, 1991

SULAWESI SELATAN: Bulu Dua (E Tanete), Siri R., 04°30.3S-119°47.2E, 700 m, 22.IV.05, D. Brzoska, 2 ♂♂ 1 ♀ (DBC), 2 ♂♂ (FCC). Bullu Dua, Waeturunge R., 04°30.6S-119°47.9E, 675 m, 14.III.07, D. Brzoska, 1 ♀ (DBC). Gowa, Bontotene (nr Molino), Manappa R., 05°16.5S-119°51.8E, 850 m, 11.III.07, D. Brzoska, 1 ♂ (FCC), 3 ♂♂ 2 ♀♀ (DBC). 28 km N Bantaeng, Bunginer, 05°23.7S-120°01.7E, 820 m, 12.III.07, D. Brzoska, 1 ♂ 3 ♀♀ (DBC). Kappo Lambang, Balang Kaliki R., 05°23.9S-119°53.4E, 1150 m, 13.III.07, F. Cassola, 1 ♂ 3 ♀♀ (FCC); D. Brzoska, 8 ♂♂ 9 ♀♀ (DBC).

Specimens collected: 37.

A member of the *tambusisii*-group of species, with labrum and appendages dark bronze metallic with violaceous to greenish reflections, *W. kalisi* was described from the Mt. Lompobattang area in southern Sulawesi Selatan. Therefore, it was interesting to find it in a more northern locality (Bulu Dua), from which, however, it was recently recorded also by SAWADA & WIESNER (2000). Our specimens were caught here while flying from rock to rock in the middle of a small stream with remnants of forest habitat, and they all have metallic cupreous labrum, strong green reflections at sides of clypeus and fully dull black elytra with no rufescent areas at all;

the femora are lighter than the other leg segments, even sometimes brownish-rufescent except on “knees” (which are narrowly black), similar to two type specimens in FCC.

59. *Wallacedela hirofumii* Cassola, 1991

SULAWESI BARAT: 12.8 km N Mamasa on Toraja rd, 02°55.3S-119°27.0E, 1370 m, 17.III.07, D. Brzoska, 2 ♂♂ 7 ♀♀ (DBC). 14 km NE Mamasa on Toraja rd, 02°55.5S-119°27.5E, 1430 m, 27.IV.05, F. Cassola, 2 ♂♂ 1 ♀ (FCC); D. Brzoska, 8 ♂♂ 4 ♀♀ (DBC). *Ibid.*, 17.III.07, F. Cassola, 5 ♂♂ 1 ♀ (FCC); D. Brzoska, 26 ♂♂ 23 ♀♀ (DBC). 23.9 km N Polewali on Mamasa rd, 03°18.9S-119°22.3E, 877 m, 26.IV.05, D. Brzoska, 2 ♂♂ (DBC). *Ibid.*, 16.III.07, F. Cassola, 2 ♂♂ (FCC); D. Brzoska, 6 ♂♂ (DBC). *Ibid.*, 20.III.07, D. Brzoska, 1 ♂ (DBC).

SULAWESI SELATAN: Torajaland, 10.7 km N Rantepao, 02°55.4S-119°50.8E, 1270 m, 22.III.07, D. Brzoska, 14 ♂♂ 3 ♀♀ (DBC). Torajaland, 9.5 km N Rantepao, 02°55.8S-119°51.1E, 1140 m, 22.III.07, F. Cassola, 1 ♂ 2 ♀♀ (FCC); D. Brzoska, 15 ♂♂ 5 ♀♀ (DBC). Torajaland, 19 km E Rantepao on Palopo rd, 02°56.3S-120°01.8E, 565 m, 28.IV.05, D. Brzoska, 5 ♂♂ 4 ♀♀ (DBC).

Specimens collected: 139.

This large, beautiful *Wallacedela* species, of the *gloriosa*-group, was known to occur only in Sulawesi Selatan and Sulawesi Tengah, and is new to Sulawesi Barat. Most *hirofumii* specimens are blue-violet in colour, thus being quite conspicuous when sitting on leaves and on rocks in the middle of streams, but since they are also rapid strong fliers they are quite difficult to collect. Some specimens are more golden-green than blue-violet in colour, thus much resembling the following species. New to Sulawesi Barat.

60. *Wallacedela curvipenis* Cassola & Wiesner, 2001

SULAWESI TENGAH: 10.7 km NW Sedoa on Wuasa-Palu rd, 01°18.3S-120°16.7E, 1410 m, 4.V.05, D. Brzoska, 1 ♀ (DBC). *Ibid.*, 14.IV.06, F. Cassola, 1 ♂ 1 ♀ (FCC); D. Brzoska, 1 ♂ 1 ♀ (DBC).

SULAWESI BARAT: 14 km NE Mamasa on Toraja rd, 02°55.5S-119°27.5E, 1430 m, 27.IV.05, F. Cassola, 1 ♂ (FCC); D. Brzoska, 3 ♂♂ (DBC). *Ibid.*, 17.III.07, F. Cassola, 1 ♀ (FCC); D. Brzoska, 3 ♂♂ 4 ♀♀ (DBC).

Specimens collected: 17.

This species was described based on a single male specimen, from Karum-Ganga in the Torajaland (CASSOLA & WIESNER 2001). We also managed to find females, which allow us to describe the opposite sex here below. *W. curvipenis* sometimes syntopically

occurs with *W. hirofumii* and resembles it very much in the field. Despite this resemblance, in the laboratory the completely different shape of male aedeagus definitely leads to an easy separation of the two species. In the field the different body colour (with the golden green elytral side margins) may help to distinguish the species. New to Sulawesi Tengah and S. Barat.

Description of the female. General characters as in male. Head and pronotum with strong golden-green reflections; elytra dull black with the side margins and the suture shiny golden green. Elytral markings yellowish, roundish, separated, the subhumeral one being narrower, elongate, almost transverse, acutely pointing laterally to the humeral spot. No elytral mirrors. Coupling sulci also lacking, consisting just in a slight poorly appreciable subsidence in the upper part of mesepisterna near the rim of mesepimera.

61. *Wallacedela glorioparadoxa* (W. Horn, 1914)

SULAWESI TENGAH: NW side of Lake Poso, 10.4 km W Tonusu on Bada rd, 01°47.8S-120°29.6E, 1125 m, 12.IV.06, D. Brzoska, 1 ♂ (DBC).

Specimens collected: 1.

This beautiful species was first described reportedly from Toli-toli, based on a single specimen which was erroneously considered to be a male (HORN 1914), and it was later recorded from the Palu and Lore Lindu areas in Central Sulawesi (CASSOLA 1991), as well as from Batas and Bantimurung in Sulawesi Selatan (CASSOLA 1996, MATALIN 1998). The single recorded specimen, from near Tonusu, was luckily seen and collected while it was resting on the lower side of a large leaf overhanging a stream. As we have seen fairly large numbers of this species taken by local collectors, who usually do much of their collecting at night with lights, it is quite possible that this species is mostly nocturnal, which may well explain why we didn't find it more often.

62. *Cylindera (Ifasina) viduata* (Fabricius, 1801)

SULAWESI SELATAN: NE Rappang, Malino, 03°43.1S-119°48.2E, 145 m, 23.IV.05, D. Brzoska, 3 ♂♂ 2 ♀♀ (DBC).

Specimens collected: 5.

A common widespread species, known to inhabit almost the whole Oriental region from India to China, SE Asia, the Sunda

Islands, the Philippines, Sulawesi, eastwards up to New Guinea (CASSOLA 1987a, 1991). For a long time recorded in the entomological literature under the junior name of *triguttata* Herbst, 1806, it was first given its original name and credited again to Fabricius by ACCIAVATTI & PEARSON (1989). This species was only found in one locality, along a village path in an open meadow.

63. *Cylindera (Ifasina) craspedota* (Schaum, 1863)

SULAWESI UTARA: Mokobang (N Lake Mooat), 00°50.4N-124°26.2E, 1010 m, 2.IV.06, D. Brzoska, 1 ♂ 1 ♀ (DBC).

SULAWESI BARAT: 31.4 km N Polewali on Mamasa rd, nr Masawa, 03°17.2S-119°22.0E, 995 m, 26.IV.05, F. Cassola, 3 ♂♂; D. Brzoska, 1 ♂ 2 ♀♀ (DBC). *Ibid.*, 16.III.07, D. Brzoska, 1 ♀ (DBC). 37 km N Polewali on Mamasa rd, 03°15.4S-119°20.6E, 885 m, 26.IV.05, F. Cassola, 1 ♂ (FCC); D. Brzoska, 2 ♀♀ (DBC). Env. of Mamasa on Toraja rd, 02°55.5S-119°27.1E, 1425 m, 27.IV.05, F. Cassola, 1 ♂ 1 ♀ (FCC); D. Brzoska, 2 ♂♂ (DBC).

SULAWESI SELATAN: Torajaland, 28 km E Rantepao on Palopo rd, 02°57.3S-120°04.2E, 1120 m, 24.IV.05, F. Cassola, 9 ♂♂ 11 ♀♀ (FCC); D. Brzoska, 12 ♂♂ 13 ♀♀ (DBC). Torajaland, 19.5 km E Rantepao on Palopo rd, 02°56.3S-120°01.8E, 565 m, 25.IV.05, D. Brzoska, 2 ♂♂ (DBC).

Specimens collected: 63.

This species was described from Sulawesi [“Habitat in insula Celebes”] (SCHAUM 1863), but it was also recorded from Borneo by MOULTON (1910). However the latter record (often reported in later literature: WIESNER 1992) would need to be verified by recently collected, well labelled material. If it is confirmed, *C. craspedota* would surprisingly turn out to be one of the very few tiger beetle species inhabiting both sides of the Makassar Strait and the Wallace Line. This species is especially remarkable by its unusual habitat and behaviour, as the specimens were found on subvertical to vertical roadcuts and embankments (fig. 4) where they stay almost motionless, apparently being very poor fliers. New to Sulawesi Barat.

64. *Cylindera (Ifasina) discreta discreta* (Schaum, 1863)

SULAWESI UTARA: Bengkol (N Manado), Kima Atas R., 01°34.1N-124°53.5E, 120 m, 28.III.06, F. Cassola, 2 ♂♂ (FCC); D. Brzoska, 7 ♂♂ 13 ♀♀ (DBC). E Tomohon, 01°22.6N-124°50.5E, 700 m, 31.III.06, D. Brzoska, 5 ♂♂ 2 ♀♀ (DBC). NE Tondano on Airmaididi rd, 01°19.8N-124°55.5E, 680 m, 30.III.06, D. Brzoska, 2 ♂♂ (DBC). Rumong Atas (W Kawangkoan), Tuunan R., 01°13.6N-124°44.3E,

- 550 m, 1.IV.06, D. Brzoska, 2 ♀♀ (DBC). Kiawa II, Ranowanko R., 01°12.7N-124°47.4E, 675 m, 31.III.06, D. Brzoska, 1 ♂ (DBC). SW Amurang, 01°10.3N-124°25.7E, 50 m, 1.IV.06, D. Brzoska, 1 ♂ 2 ♀♀ (DBC). San Dangan nr Kakas (SW Lake Tondano), 01°09.7N-124°53.3E, 720 m, 30.III.06, F. Cassola, 1 ♀ (FCC); D. Brzoska, 2 ♂♂ (DBC). Dumoga-Bone NP, London R. (trib. of Tumpah R.), 00°34.6N-123°54.0E, 230 m, 4.IV.06, D. Brzoska, 1 ♂ (DBC). 8.9 km N Molibagu, 00°26.6N-123°58.2E, 210 m, 5.IV.06, D. Brzoska, 1f (DBC).
- GORONTALO: Bakti (W Isimu), Kurakura R., 00°38.3N-122°45.8E, 80 m, 7.IV.06, F. Cassola, 2 ♂♂ 2 ♀♀ (FCC). Bakti (W Isimu), Kurakura R., 00°38.2N-122°45.9E, 80 m, 7.IV.06, D. Brzoska, 3 ♂♂ 1 ♀ (DBC). Ulawa (N Marisa), Tolodayuno R., 00°32.3N-121°58.2E, 50 m, 7.IV.06, F. Cassola, 7 ♂♂ 2 ♀♀ (FCC); D. Brzoska, 20 ♂♂ 12 ♀♀ (DBC). Tutulo (E Gorontalo), 00°30.9N-123°14.4E, 75 m, 6.IV.06, F. Cassola, 2 ♂♂ 2 ♀♀ (FCC); D. Brzoska, 2 ♂♂ (DBC).
- SULAWESI TENGAH: 5.8 km S of "km 4-Basidondo" (SW Tolitoli), 00°42.5N-120°37.5E, 136 m, 9.IV.06, D. Brzoska, 1 ♀ (DBC). Ongka (W Moutong), 01°29.2N-120°48.8E, 70 m, 8.IV.06, D. Brzoska, 1 ♂ 1 ♀ (DBC). 35 km NW Mapane, Tambarana on Tinombo-Poso rd, 01°13.7S-120°33.5E, 28 m, 10.IV.06, F. Cassola, 2 ♀♀ (FCC). 3 km S Kulawi on Gimpu rd (S Palu), 01°27.2S-119°59.0E, 620 m, 6.V.05, D. Brzoska, 1 ♂ 1 ♀ (DBC). *Ibid.*, 15.IV.06, F. Cassola, 1 ♂ (FCC). 5.2 km N Pandiri on Poso rd, 01°28.3S-120°45.3E, 20 m, 2.V.05, F. Cassola, 1 ♀ (FCC); D. Brzoska, 9 ♂♂ 13 ♀♀ (DBC). *Ibid.*, 11.IV.06, F. Cassola, 1 ♂ 1 ♀ (FCC); D. Brzoska, 9 ♂♂ 1 ♀ (DBC).
- SULAWESI BARAT: 37 km N Polewali on Mamasa rd, 03°15.3S-119°20.6E, 885 m, 26.IV.05, F. Cassola, 1 ♂ 4 ♀♀ (FCC); D. Brzoska, 8 ♂♂ 7 ♀♀ (DBC). 36.6 km N Polewali on Mamasa rd, 03°15.4S-119°20.6E, 865 m, 26.IV.05, D. Brzoska, 3 ♂♂ 5 ♀♀ (DBC). NE Polewali, 03°15.9S-119°14.7E, 335m, 19.III.07, D. Brzoska, 5 ♂♂ 2 ♀♀ (DBC). Lemogamba (NE Polewali), Salindu R., 03°21.4S-119°17.3E, 32m, 19.III.07, D. Brzoska, 1 ♂ (DBC).
- SULAWESI SELATAN: 30 km W Soroako, 02°35.2S-121°18.6E, 500 m, 23.III.07, F. Cassola, 1 ♂ (FCC). Bakarua Dam rd (E Polewali), km 2, 03°26.9S-119°35.3E, 650m, 20.III.07, D. Brzoska, 1 ♀ (DBC). 53 km NE Anabanua, 1 km N Siwa, 03°41.9S-120°24.6E, 25 m, 29.IV.05, D. Brzoska, 1 ♂ 2 ♀♀ (DBC). 2.8 km E Anabanua, half-dry creek, 03°56.9S-120°05.4E, 80 m, 15.III.07, F. Cassola, 1 ♂ 2 ♀♀ (FCC); D. Brzoska, 1 ♂ 4 ♀♀ (DBC). Watu (E Tanete), Gellenge R., 04°30.3S-119°44.0E, 125 m, 22.IV.05, D. Brzoska, 1 ♂ (DBC). Jupang nr Soppeng, Pising R., 04°31.5S-119°52.1E, 200 m, 22.IV.05, F. Cassola, 3 ♂♂ 2 ♀♀ (FCC); D. Brzoska, 1 ♀ (DBC). Bantimurung (E Maros), 05°01.1S-119°40.7E, 35 m, 21.IV.05, D. Brzoska, 6 ♂♂ 1 ♀ (DBC). 20 km E Maros, 05°03.2S-119°43.4E, 165 m, 21.IV.05, F. Cassola, 2 ♂♂ 2 ♀♀ (FCC); D. Brzoska, 7 ♂♂ 8 ♀♀ (DBC). Bonto Jai Desa, Bori Sallo Kelamatan Parang Loe, Kabudaten Gowa, Rakiekang R., 140 m, 05°15.1S-119°40.8E, 18.IV.05, F. Cassola, 1 ♂ (FCC); D. Brzoska, 2 ♂♂ 1 ♀ (DBC). Malalang (50 km E Makassar), 05°16.2S-119°43.8E, 220 m, 18.IV.05, D. Brzoska 2 ♂♂ (DBC). Malino on Majannang rd, 05°15.7S-119°50.8E, 245 m, landslide, 19.IV.05, F. Cassola, 1 ♂ (FCC); D. Brzoska, 3 ♂♂ 1 ♀ (DBC). Bontoloe, Salampaeng R., 05°23.3S-119°50.5E, 890m, 13.III.07, D. Brzoska, 1 ♂ (DBC). 81 km E Makassar on Sapaya rd, 05°23.4S-119°50.5E, 920 m, 20.IV.05, D. Brzoska, 4 ♂♂ 5 ♀♀ (DBC). Gunung Lompobatang, Loka R., 05°29.8S-119°55.4E, 485 m, 20.IV.05, F. Cassola, 10 ♂♂ 5 ♀♀ (FCC); D. Brzoska, 6 ♂♂ 10 ♀♀ (DBC).

SULAWESI TENGGARA: 5 km SE Asera (N Kendari), 03°34.0S-122°08.1E, 42m, 29.III.07, D. Brzoska, 2 ♂♂ 2 ♀♀ (DBC). 11 km SE of Asera (N Kendari), 03°34.7S-122°09.2E, 210 m, 30.III.07, F. Cassola, 2 ♀♀ (FCC). N Wawolobi, vinc. Asolu, 03°38.9S-121°52.4E, 120m, 27.III.07, D. Brzoska, 1 ♀ (DBC). Maroso-Anging R., 03°39.6S-121°02.7E, 24m, 25.III.07, D. Brzoska, 2 ♂♂ (DBC). 19.5 km S Sawa (N Kendari), 03°53.4S-122°22.3E, 16 m, 28.III.07, F. Cassola, 2 ♂♂ (FCC); D. Brzoska, 5 ♂♂ 5 ♀♀ (DBC). 43 km W Kendari, 03°58.0S-122°15.4E, 35m, 28.III.07, D. Brzoska, 2 ♂♂ 2 ♀♀ (DBC). 7.5 km E Kolaka on Kendari rd, 04°03.6S-121°42.0E, 80m, 26.III.07, D. Brzoska, 1 ♂ (DBC). Amowito, Siama (nr Kendari airport), 04°06.0S-122°22.8E, 155 m, 31.III.07, F. Cassola, 1 ♂ (FCC). *Ibid.*, 1.IV.07, D. Brzoska, 5 ♂♂ 1 ♀ (DBC). Buton I., 0.5 km N Babau, 05°26.7S-122°38.9E, 40m, 2.IV.07, D. Brzoska, 1 ♀ 1 ♀ (DBC). Buton I., S Waondo Wolio, 05°10.8S-122°52.3E, 310m, 3.IV.07, D. Brzoska, 2 ♂♂ 1 ♀ (DBC).

Specimens collected: 309.

C. discreta constitutes a polytypic complex, consisting of several species or so-called “subspecies” (most of which proved to be separate valid species), from various parts of its enormous geographical range: *froggatti* Macleay, 1887 (CASSOLA 1987a), *spinosa* W. Horn, 1905 (BROUERUS VAN NIDEK 1968), *reductula* W. Horn, 1915 (ACCIAVATTI & PEARSON 1989), *salomonica* Cassola, 1987 (CASSOLA 1987b), *takahashii* Cassola & Satô, 2004 (CASSOLA & SATÔ 2004). As it was first described from Sulawesi [“Habitat in insula Celebes (Menado)”: SCHAUM 1863], all the collected specimens mentioned above clearly are the true *discreta*, which unlike other forms lacks any apical lunule on the elytra. The species was found in a wide variety of habitats, from river sandbars to forest streams and upland trails. New to Gorontalo and Sulawesi Barat.

65. *Myriochila (Myriochila) specularis brevipennis* (W. Horn, 1897)

SULAWESI SELATAN: 53 km NE Anabanua, 1 km N Siwa, 03°41.9S-120°24.6E, 30 m, 29.IV.05, F. Cassola, 1 ♀ (FCC); D. Brzoska, 1 ♂ (DBC).

Specimens collected: 2.

This species was first described from southern China by CHEVROLAT (1845), under the name of *speculifera*, but it was later given by CHAUDOIR (1865) the name of *specularis* because Chevrolat’s name was preoccupied by a South American species which in present-day taxonomy belongs to a far distant genus (*Pentacomia* Bates, 1872) belonging to a different Cicindelinae subtribe (RIVALIER 1971).

According to the ICZN (1999), *specularis*, not *speculifera* (CASSOLA 1991), should be retained as the valid name for the species. Most *Myriochila* species are strictly limicolous, and as a matter of fact the only two specimens we collected were found near a temporary muddy puddle in a gravel quarry.

66. *Myriochila (Myriochila) sinica* (Fleutiaux, 1889) (fig. 38 a)

SULAWESI TENGGARA: 4 km W Koeono, 04°26.7S-122°20.5E, 22m, 7.IV.07, D. Brzoska, 2 ♂♂ (FCC), 6 ♂♂ 2 ♀♀ (DBC).

Specimens collected: 10.

This small species, known to occur in continental South-East Asia (from Myanmar to Vietnam) as well as in Java (WIESNER 1992), is reported from Sulawesi for the first time. A very wary species, it was found in open areas of a tall grass pasture away from standing water. Unlike most other *Myriochila* species, it may not be totally limicolous.

67. *Enantiola denticollis* (W. Horn, 1895) (fig. 38 b-c)

SULAWESI TENGGARA: Teluk Lopuko (S Kendari), 04°00.1S-122°37.5E, mangrove mudflats, sea level, 31.III.07, D. Brzoska, 1 ♂ (DBC).

Specimens collected: 1.

This species, mainly distributed in New Guinea and Moluccas (Aru Is., Ceram), was first recorded from Sulawesi (Sulawesi Tengah) by CASSOLA (1991). It is very similar to the following species, but the very different shape of male aedeagus and the different location of the female mesepisternal coupling sulcus make it quite easy to distinguish from the following species (CASSOLA 1991). New to Sulawesi Tenggara.

68. *Enantiola wallacei* (Bates, 1874) (fig. 38 d)

SULAWESI UTARA: Tonkenia (N Menado), 01°34.2N-124°48.4E, 1 m, mangrove mudflats, 28.III.06, D. Brzoska, 2 ♂♂ 2 ♀♀ (DBC).

SULAWESI TENGAH: 6.5 km W Poso, Tomini Bay, mangrove beach, 01°24.2S-120°42.8E, sea level, 3.V.05, F. Cassola, 1 ♀ (FCC); D. Brzoska, 2 ♂♂ 1 ♀ (DBC). *Ibid.*, 13.IV.06, F. Cassola, 4 ♂♂ 3 ♀♀ (FCC); D. Brzoska, 1 ♂ 1 ♀ (DBC).

Specimens collected: 17.

This species, a Sulawesi endemic, is to be found on sandy sea-beaches among the mangroves. We found it in two localities only. The shape of the apex of aedeagus clearly separates it from the few other congeneric species, one of which [*E. denticollis* (W. Horn, 1895)], from New Guinea and Moluccas, is also known to occur in Sulawesi (CASSOLA 1991) (see above).

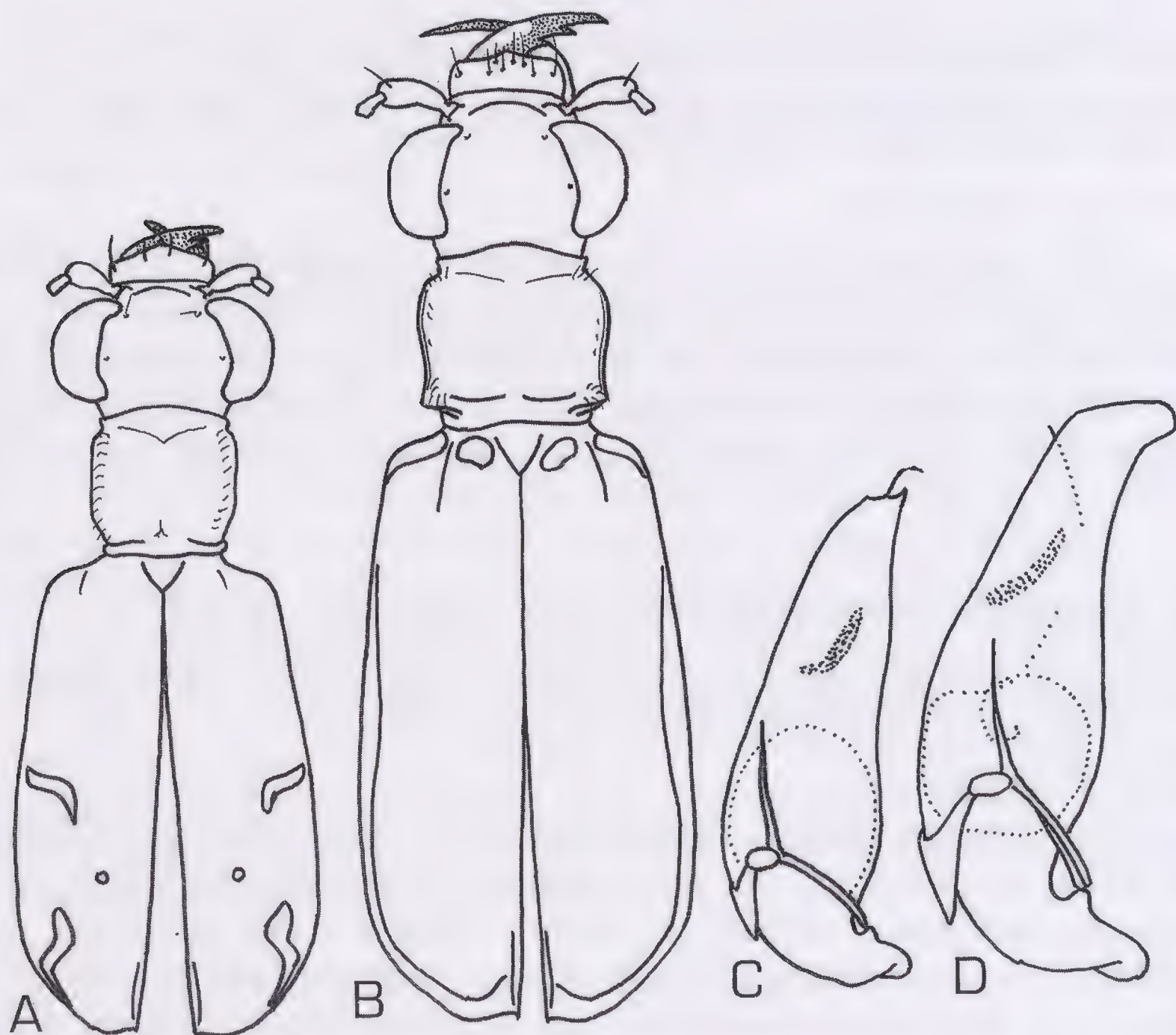


Fig. 38 - *Myriochila* (*Myriochila*) *sinica* (Fleutiaux, 1889), male specimen from 4 km W Koeono, Sulawesi Tenggara: a. habitus. *Enantiola denticollis* (W. Horn, 1895), male specimen from Teluk Lopuko, Sulawesi Tenggara: b. habitus; c. aedeagus. *Enantiola wallacei* (Bates, 1874), male specimen from 6.5 km W of Poso, Sulawesi Tengah: d. aedeagus.

DISCUSSION

The Sulawesi tiger beetle fauna presently includes 116 species, 68 of which (well over half the fauna) were collected during our survey. There are a number of reasons that may explain why

other forms were not collected: seasonality (all field work was done during the months of March, April and May, and some species may have other seasonal patterns); time of day (we collected only during daylight hours and would have missed primarily nocturnal species); area covered (although we visited all six provinces there are still many areas that were not surveyed); degraded habitats (we collected along roads where habitats tend to be more degraded); microhabitats (various habitats were surveyed, but we may have overlooked very specific microhabitats); extinction (with the rapid removal of trees in many areas, especially along the critical stream habitats, some species may have already become extinct or very rare).

However, a few sites and areas proved to be especially rewarding, the best ones probably being the following ones:

1) Sulawesi Barat: stream at 23.9 km N of Polewali on the Mamasa road (03°18.9S-119°22.3E, elevation 877 m): sixteen species were found in less than a 0.5 km section of the stream [*Oxygoniola chamaeleon*, *Therates fasciatus*, *Therates wiesneri*, *Therates latreillei*, *Therates payeni*, *Therates punctatoviridis*, *Calomera decemguttata*, *Thopeutica* (*Thopeutica*) *diana*, *Thopeutica* (*Thopeutica*) *vantoli*, *Thopeutica* (*Thopeutica*) *subaurothoracica*, *Thopeutica* (*Thopeutica*) *labrosetosa*, *Thopeutica* (*Pseudotherates*) *alexanderriedeli*, *Wallacedela duffelsi*, *Wallacedela krikkeni*, *Wallacedela kobayashii*, *Wallacedela hirofumii*, this reckoning not including the common and widespread *Therates labiatus* that wasn't collected here]. This high number of syntopically living tiger beetle species probably represents an outstanding world record. Moreover, in other spots on the same road from Polewali to Mamasa, six more species [*Dilatotarsa patricia*, *Hipparidium heros*, *Calomera funerea multinotata*, *Calomera mamasa*, *Cylindera* (*Ifasina*) *craspedota*, *Cylindera* (*Ifasina*) *discreta*] were collected.

2) Sulawesi Tengah: NW side of Lake Poso, environs of Tonusu and Bada road (several spots): fourteen species [*Oxygoniola chamaeleon*, *Therates fasciatus*, *Therates bipunctatus*, *Therates latreillei*, *Therates pseudobipunctatus*, *Therates payeni*, *Therates labiatus*, *Thopeutica* (*Thopeutica*) *toraja*, *Thopeutica* (*Thopeutica*) *stenodera*, *Thopeutica* (*Pseudotherates*) *apiceflava*, *Wallacedela horii*, *Wallacedela posoana*, *Wallacedela sabiri*, *Wallacedela glorioparadoxa*] Moreover, to this number it can be added one further species, *Thopeutica* (*Pseudo-*

therates) *gerstmeieri* (WERNER & WIESNER 1997, 1999), whose type locality is included in this area but which was not found by us.

3) Sulawesi Tengah: S of Palu, Gimpu area (from N of Kulawi to 6 km S of Gimpu, several spots): fourteen species [*Therates fasciatus*, *Therates wiesneri*, *Therates payeni*, *Therates labiatus*, *Calomera funerea multinotata*, *Calomera decemguttata*, *Thopeutica* (*Thopeutica*) *sawadai*, *Thopeutica* (*Thopeutica*) *stenodera*, *Thopeutica* (*Thopeutica*) *subaurothoracica*, *Wallacedela duffelsi*, *Wallacedela krikkeni*, *Wallacedela kobayashii*, *Wallacedela nishiyamai*, *Cylindera* (*Ifasina*) *discreta*].

4) Sulawesi Selatan: Torajaland, Rantepao-Palopo road (several spots): thirteen species [*Therates bipunctatus*, *Therates pseudobipunctatus*, *Calomera funerea multinotata*, *Calomera decemguttata*, *Hipparidium heros*, *Thopeutica* (*Thopeutica*) *toraja*, *Thopeutica* (*Thopeutica*) *stenodera*, *Thopeutica* (*Thopeutica*) *waltheri*, *Wallacedela horii*, *Wallacedela krikkeni*, *Wallacedela kobayashii*, *Wallacedela hirofumii*, *Cylindera* (*Ifasina*) *craspedota*].

5) Sulawesi Tengah: SW of Tolitoli, road S of "km 4-Basidondo" (several spots): eleven species [*Oxygoniola chamaeleon*, *Therates fasciatus*, *Therates payeni*, *Therates labiatus*, *Thopeutica* (*Thopeutica*) *pseudoschaumi*, *Thopeutica* (*Thopeutica*) *stenodera*, *Thopeutica* (*Pseudotherates*) *guttula*, *Thopeutica* (*Pseudotherates*) *flavilabris*, *Thopeutica* (*Pseudotherates*) *theratoides*, *Wallacedela basidondo*, *Cylindera* (*Ifasina*) *discreta*].

6) Sulawesi Tenggara: Moramo Waterfalls (S of Kendari, Sumber Sari dist., 04°13.6S-122°44.1E, elevation 85 m): ten species [*Therates flavilabris*, *Therates latreillei*, *Therates pseudobipunctatus*, *Therates labiatus*, *Hipparidium heros*, *Calomera decemguttata*, *Thopeutica* (*Thopeutica*) *bugis*, *Thopeutica* (*Thopeutica*) *stenodera*, *Thopeutica* (*Pseudotherates*) *guttula*, *Thopeutica* (*Pseudotherates*) *beccarii*].

7) Sulawesi Utara: Dumoga Bone NP, London R. (tributary of Tumpah R., 00°34.6N-123°54.0E, elevation 230 m): nine species [*Oxygoniola chamaeleon*, *Therates fasciatus*, *Therates latreillei*, *Therates labiatus*, *Calomera decemguttata*, *Thopeutica* (*Thopeutica*) *eustalacta*, *Thopeutica* (*Thopeutica*) *stenodera*, *Wallacedela storki*, *Cylindera* (*Ifasina*) *discreta*].

8) Sulawesi Selatan: 20 km W of Soroako (stream at 02°35.2S-121°18.6E, elevation 500 m): eight species [*Oxygoniola*

chamaeleon, *Therates bipunctatus*, *Therates pseudobipunctatus*, *Therates labiatus*, *Thopeutica* (*Thopeutica*) *bugis*, *Thopeutica* (*Thopeutica*) *stenodera*, *Thopeutica* (*Pseudotherates*) *apiceflava*, *Wallacedela horii paucirufescens*].

9) Sulawesi Tenggara: N of Kendari, environs of Asera (several spots): seven species [*Therates bipunctatus*, *Therates flavilabris*, *Thopeutica* (*Thopeutica*) *diana*, *Thopeutica* (*Pseudotherates*) *albapicalis*, *Wallacedela pseudofulvescens*, *Wallacedela horii paucirufescens*, *Cylindera* (*Ifasina*) *discreta*].

10) Sulawesi Tengah: 5.2 km W Pandiri on Poso rd (01°28.2S-120°46.0E, elevation 20 m): six species [*Therates fascia-tus*, *Therates bipunctatus*, *Hipparidium heros*, *Calomera decemguttata*, *Wallacedela posoana*, *Cylindera* (*Ifasina*) *discreta*].

It has to be emphasized again the very great similarity of facies, despite their probably not too close relationship, between the Sulawesi genera *Thopeutica* and *Wallacedela* (CASSOLA, 1991). As a general rule, most species of the former genus usually lack any female mesepisternal coupling sulci, while most *Wallacedela* species usually have more or less marked mesepisternal grooves or pits. However, there are notable exceptions: for instance, several *Thopeutica* (*Thopeutica*) species [*werneriana*, *pseudoschaumi*, *albolabiata*, *stenodera*, *waltheri*, as well as the small species of the *aurothoracica* group (*aurothoracica*, *subaurothoracica*, *labrosetosa*, *grossipenis*, *whit-teni*)] have noticeable coupling sulci in females, while, in contrast, some *Wallacedela* species (such as *schaumi*, *triangulomicans*, *gloriosa*, *dumogabonei* and *hirofumii*) almost fully lack this remarkable sexual character. As to *W. glorioparadoxa*, it has shallow, poorly marked coupling sulci which consist of a slight dorso-ventral groove shaped like a very open S. The only reliable separating character for the two genera thus lies in the structure of the inner sac of male aedeagi, which include a long convoluted flagellum in all the *Thopeutica* species (including those of subgenus *Pseudotherates*) that is completely missing in all the *Wallacedela* species. The general facies alone may well be misleading, as it was made clear by *Wallacedela major* (previously thought, based on the single female holotype, to be a *Thopeutica* of the subgenus *Pseudotherates*) and, in contrast, by *Thopeutica* (*Thopeutica*) *pseudoschaumi* and *albolabiata*, herein described, which both were mistaken for *Wallacedela schauumi* when

in the field. This also makes it clear that a proper identification of the species must always be based on the careful examination of the male aedeagi and their inner sac.

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ABSTRACT

Following first author's major revision of the tiger beetle fauna of Sulawesi, Indonesia (CASSOLA 1991), three collecting trips were carried out in April-May 2005, March-April 2006 and March-April 2007 to all six Sulawesi provinces [North (Sulawesi Utara), Gorontalo, Central (Sulawesi Tengah), West (Sulawesi Barat), South (Sulawesi Selatan) and South-East (Sulawesi Tenggara)].

This fauna confirmed itself to be exceptionally rich and diverse. Over five thousand specimens and a total of sixty-nine species (well over half the fauna) were collected. Thirteen species are newly described in this paper [*Calomera mamasa*, from West Sulawesi; six *Thopeutica* (*Thopeutica*.) species: *pseudoschaumi* and *albolabiata*, from Central Sulawesi; *naja*, from South Sulawesi; *subaurothoracica* and *grossipenis*, from West and Central Sulawesi; *labrosetosa*, also from West Sulawesi and even syntopically occurring with *subaurothoracica*; as well as six *Wallacedela* species: *judithae*, from North Sulawesi; *haffendeni*, from Gorontalo and North Sulawesi; *paulina*, *posoana*, *sabiri* and *basidondo*, from Central Sulawesi]. One new subspecies, *Wallacedela horii* Cassola ssp. *paucirufescens* nov., is described from Sulawesi Tenggara and the northern part of south-eastern peninsula. Moreover, the species described by Cassola (1991) as *Thopeutica* (*Pseudotherates*) *major* is transferred to the genus *Wallacedela* (comb. nova) and the male is described; the male of *Wallacedela gloriosula* and the female of *Wallacedela curvipenis* are also described; *Therates pseudobipunctatus* and *Thopeutica* (*Pseudotherates*) *flavilabris* are raised to full specific status, *Myriochila* (*Myriochila*) *sinica* is reported from the island for the first time, and many new provincial records are indicated. Information about the habitat and ecology of various species is also given.

RIASSUNTO

Note di raccolta e nuovi dati sulla fauna a cicindele di Sulawesi, Indonesia, con descrizione di quattordici nuovi taxa (Coleoptera, Cicindelidae).

Dopo la revisione da parte del primo autore della fauna a cicindele di Sulawesi (già Celebes) in Indonesia (CASSOLA 1991), sono stati effettuati tre viaggi di raccolta nell'aprile-maggio 2005, in marzo-aprile 2006 e in marzo-aprile 2007, in tutte e sei le province di Sulawesi [settentrionale (Sulawesi Utara), Gorontalo, centrale (Sulawesi Tengah), occidentale (Sulawesi Barat), meridionale (Sulawesi Selatan) e sud-orientale (Sulawesi Tenggara)].

La fauna si è confermata eccezionalmente ricca e diversificata: infatti sono stati raccolti in tutto oltre cinquemila esemplari ed un totale di ben sessantanove specie (quindi oltre la metà dell'intera fauna dell'isola). Tredici specie vengono qui descritte come nuove [*Calomera mamasa*, della provincia occidentale; sei specie di *Thopeutica* (*Thopeutica*): *pseudoschaumi* e *albolabiata*, della provincia centrale; *naja*, di quella meridionale; *subaurothoracica* e *grossipenis*, delle province centrale e occidentale; *labrosetosa*, anch'essa della provincia occidentale e trovata perfino in sintopia con *subaurothoracica*; nonché sei specie di *Wallacedela*: *judithae*, della provincia settentrionale; *haffendeni*, della provincia di Gorontalo e di quella settentrionale; *paulina*, *posoana*, *sabiri* e *basidondo*, tutte della provincia centrale]. Viene pure descritta una nuova sottospecie, *Wallacedela horii* Cassola ssp. *paucirufescens*, della penisola sud-orientale e del nord della medesima penisola.

Inoltre la specie già descritta da Cassola nel 1991 come *Thopeutica* (*Pseudotherates*) *major* viene trasferita al genere *Wallacedela* (comb. nova) e ne viene descritto il maschio; vengono anche descritti il maschio di *Wallacedela gloriosula* e la femmina di *Wallacedela curvipenis*; *Therates pseudobipunctatus* e *Thopeutica* (*Pseudotherates*) *flavilabris* vengono elevati al rango di buone specie, *Myriochila* (*Myriochila*) *sinica* viene segnalata per la prima volta dell'isola e vengono segnalati parecchi nuovi reperti provinciali. Viene infine fornita qualche informazione circa l'habitat e l'ecologia di varie specie.
